

Amendments to the Drawings:

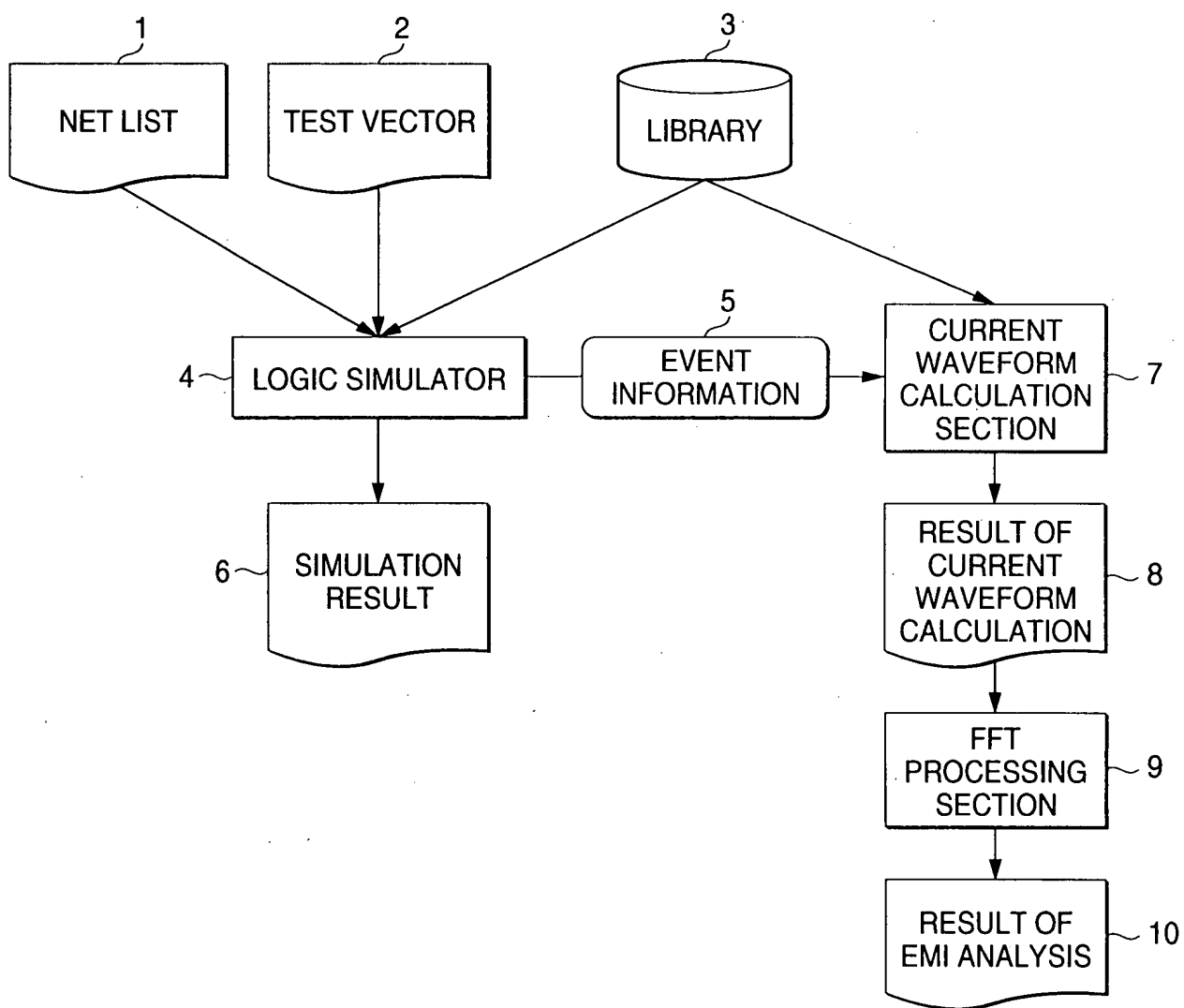
The attached sheets of drawing replace the drawings which include Figures 1-123. The foreign language has been replaced with English translations.

Attachments: Replacement Formal Drawings.



FIG. 1

BLOCK DIAGRAM SHOWING OVERALL FLOW OF PROCESSING OF
EMI ANALYSIS METHOD ACCORDING TO THE PRESENT INVENTION





2/94

FIG. 2

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (FIRST EMBODIMENT)

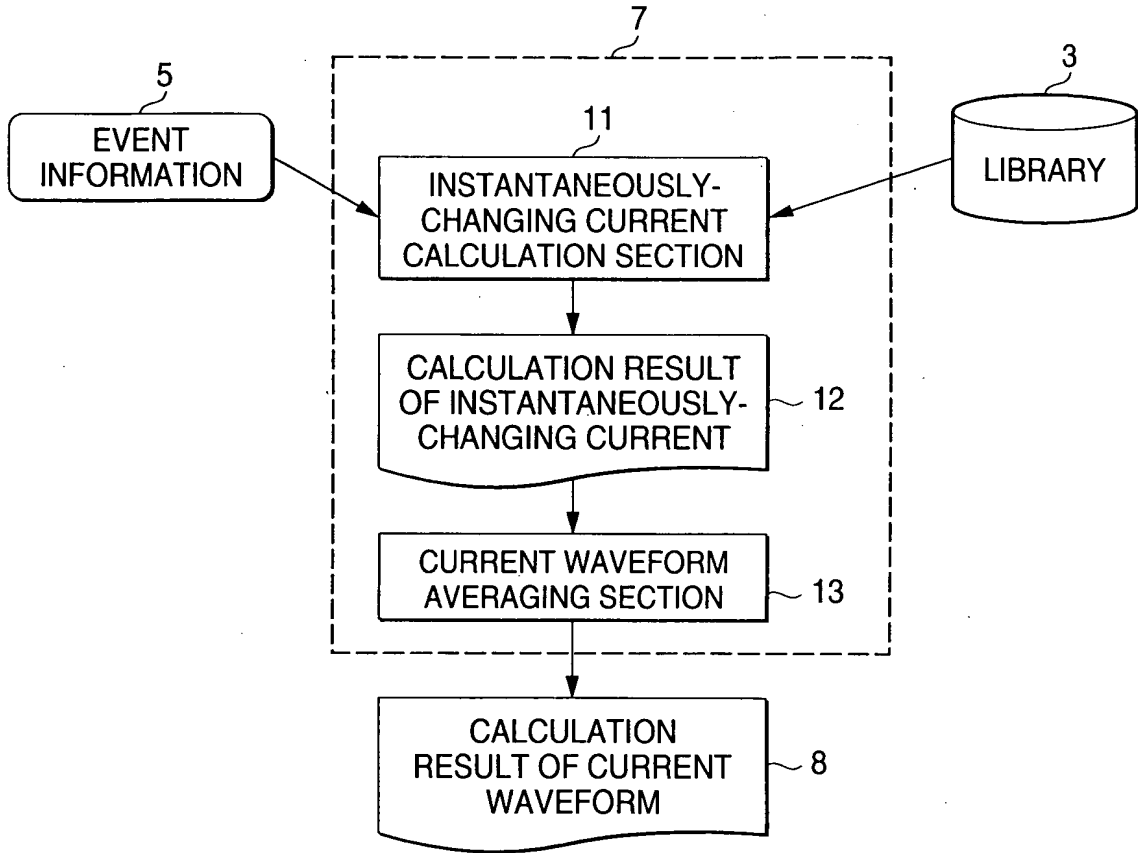


FIG. 3

CALCULATION RESULT OF INSTANTANEOUSLY-CHANGING ELECTRIC CURRENT

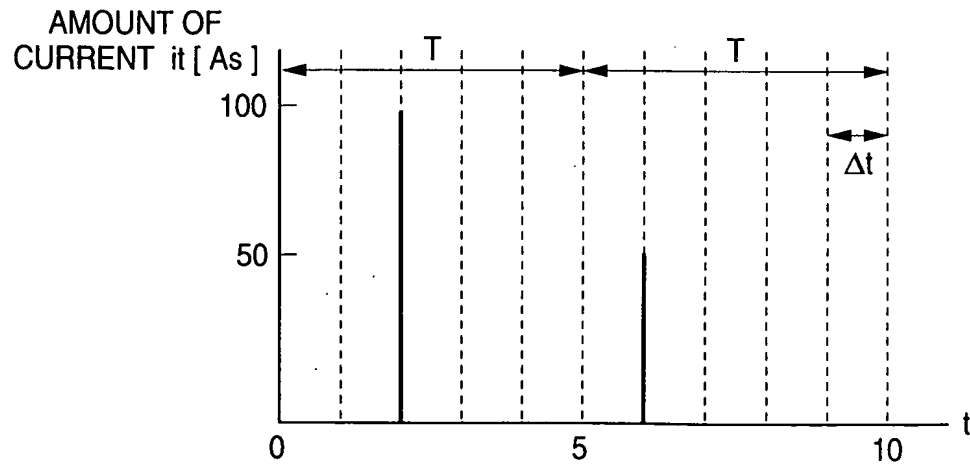




FIG. 4

FLOWCHART FOR AVERAGING CURRENT WAVEFORM

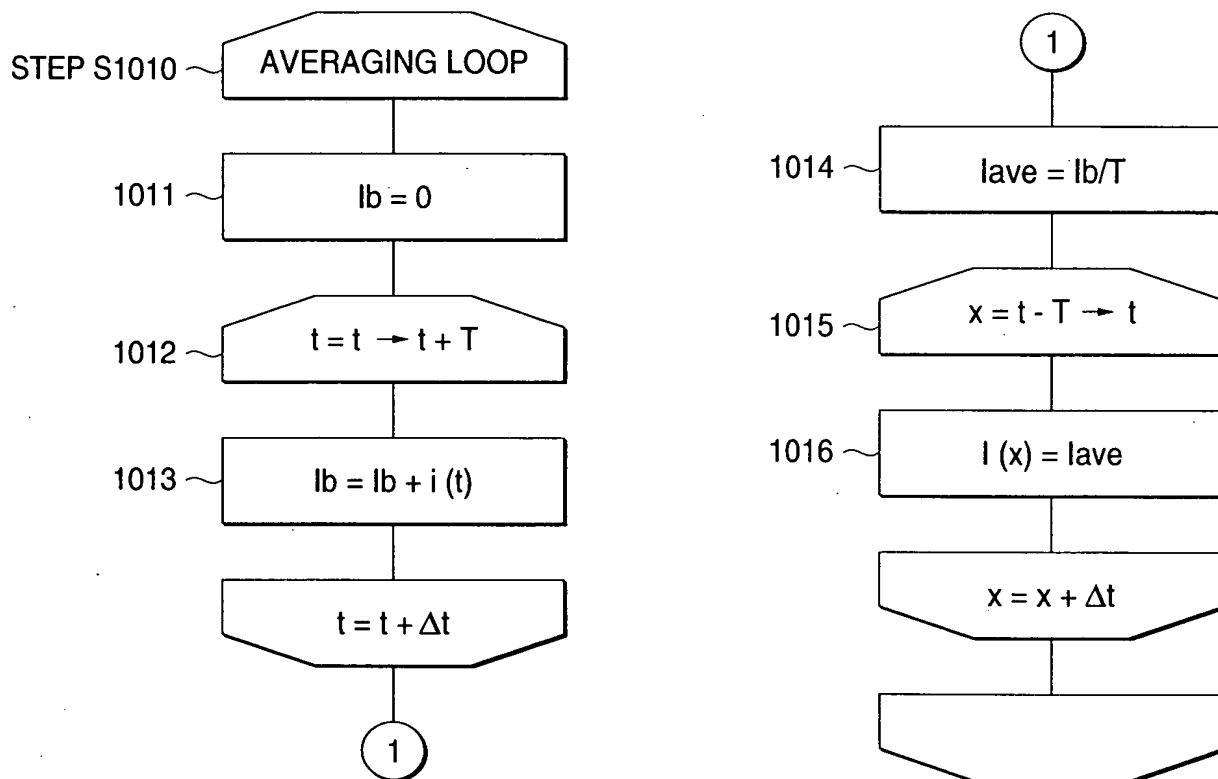
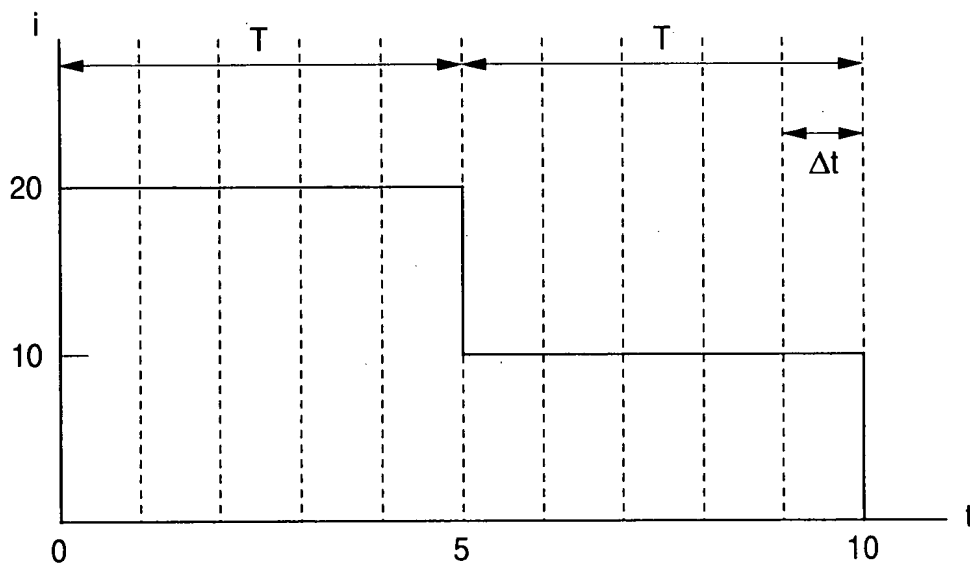


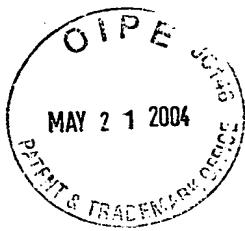


FIG. 5

CALCULATION RESULT OF CURRENT WAVEFORM (FIRST EMBODIMENT)



AT $T = 5$



5/94

FIG. 6

RESULT OF FFT ANALYSIS

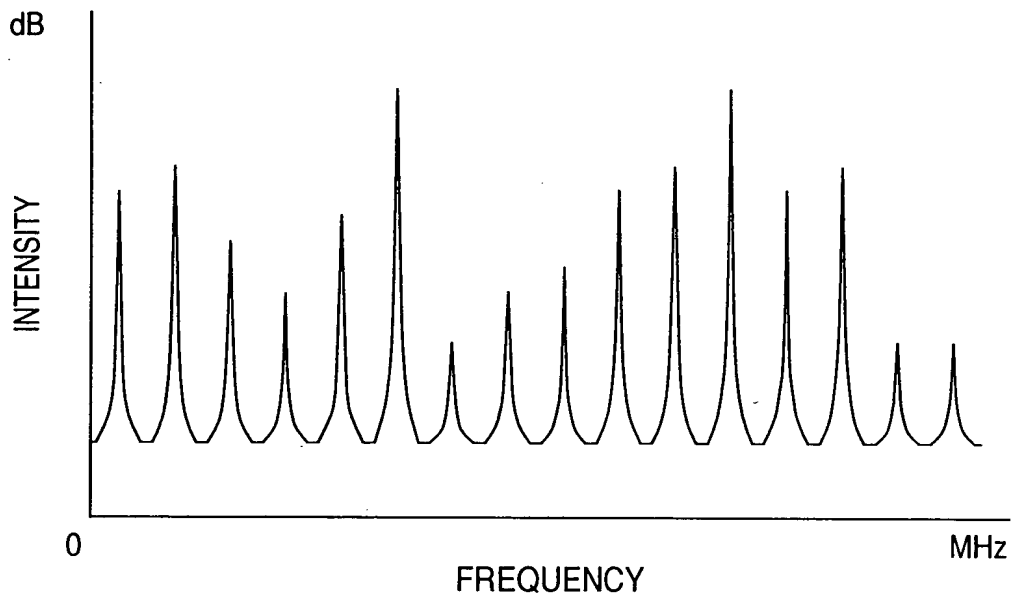
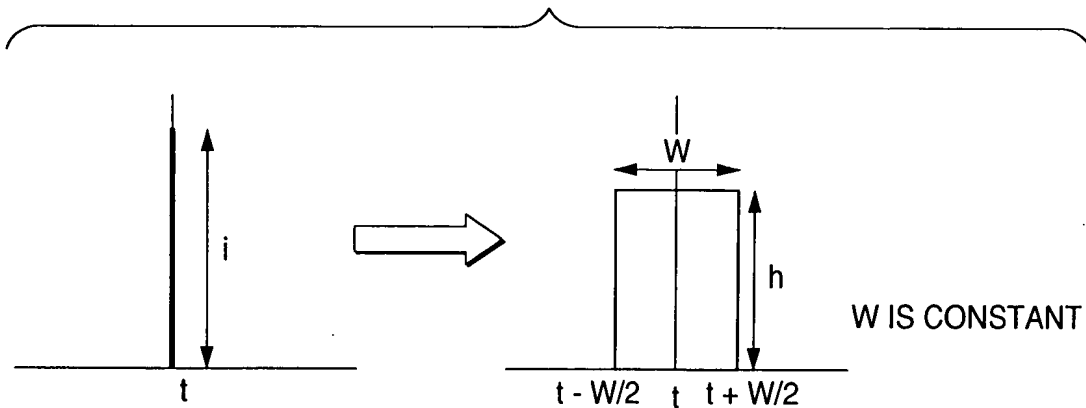


FIG. 7

RECTANGULAR WAVEFORM MODEL (SECOND EMBODIMENT)

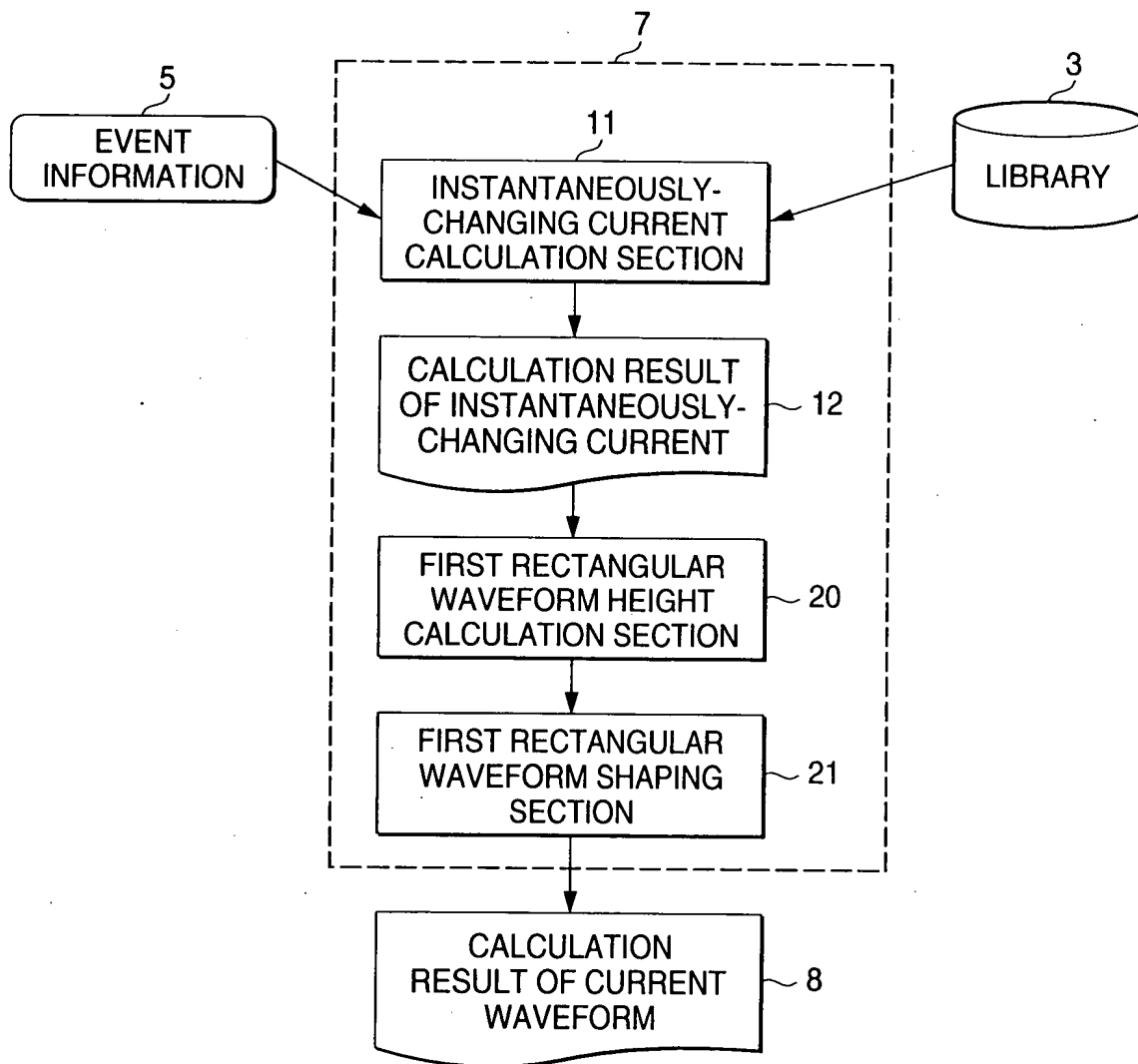


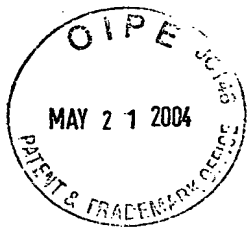


6/94

FIG. 8

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (SECOND EMBODIMENT)

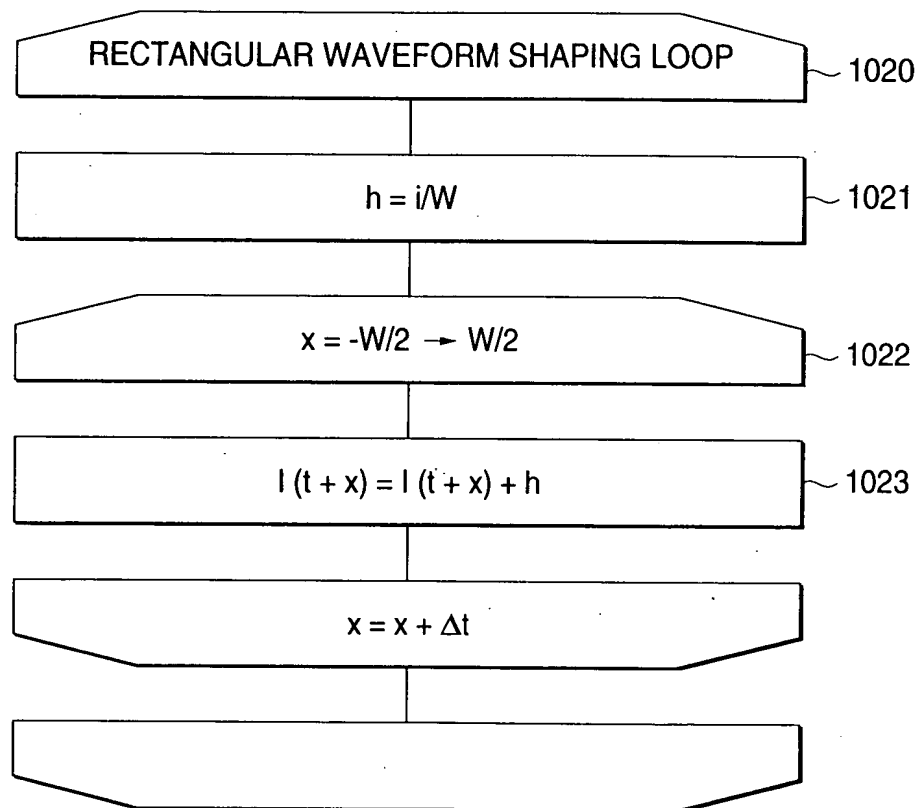




7/94

FIG. 9

FLOWCHART OF FIRST RECTANGULAR WAVEFORM SHAPING OPERATION

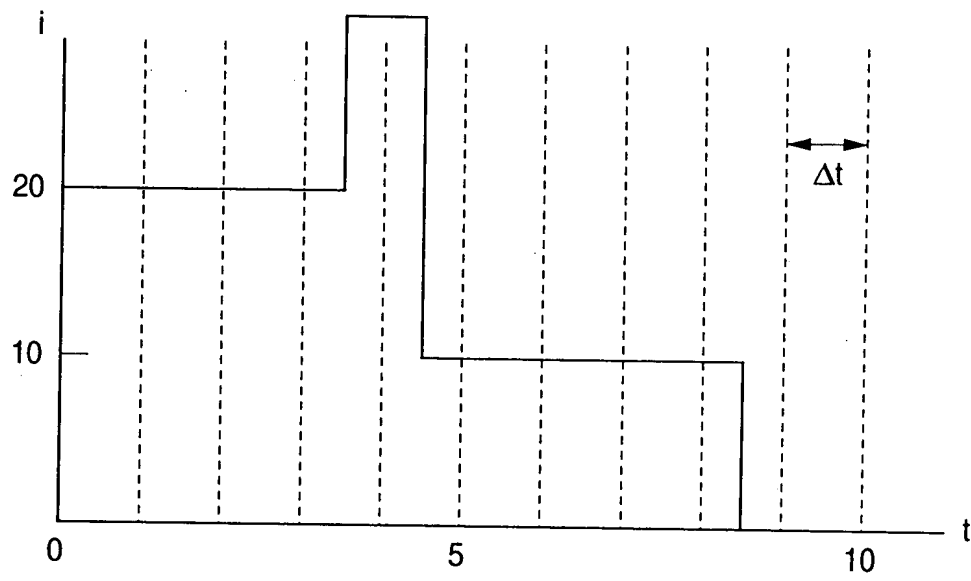




8/94

FIG. 10

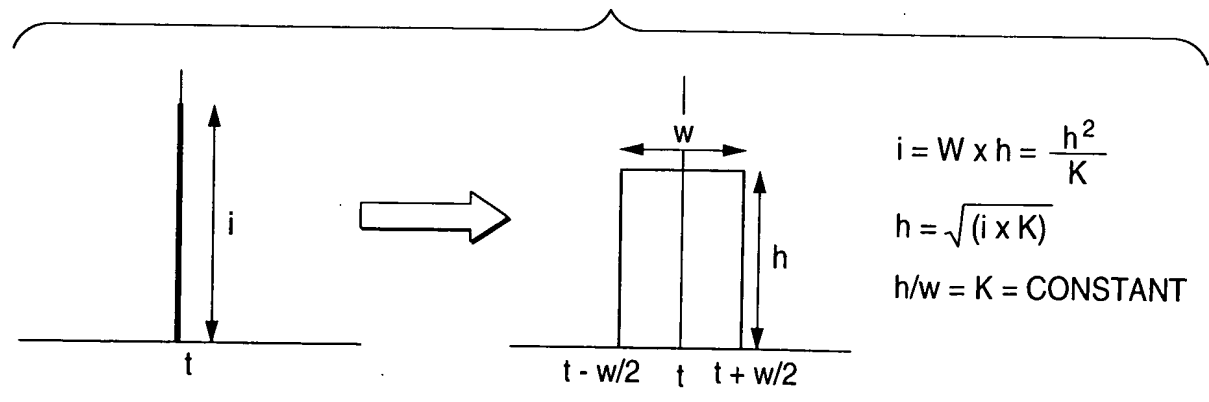
CALCULATION RESULT OF CURRENT WAVEFORM (SECOND EMBODIMENT)

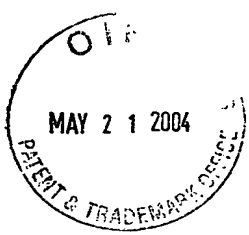


AT W = 5

FIG. 11

RECTANGULAR WAVEFORM MODEL (THIRD EMBODIMENT)

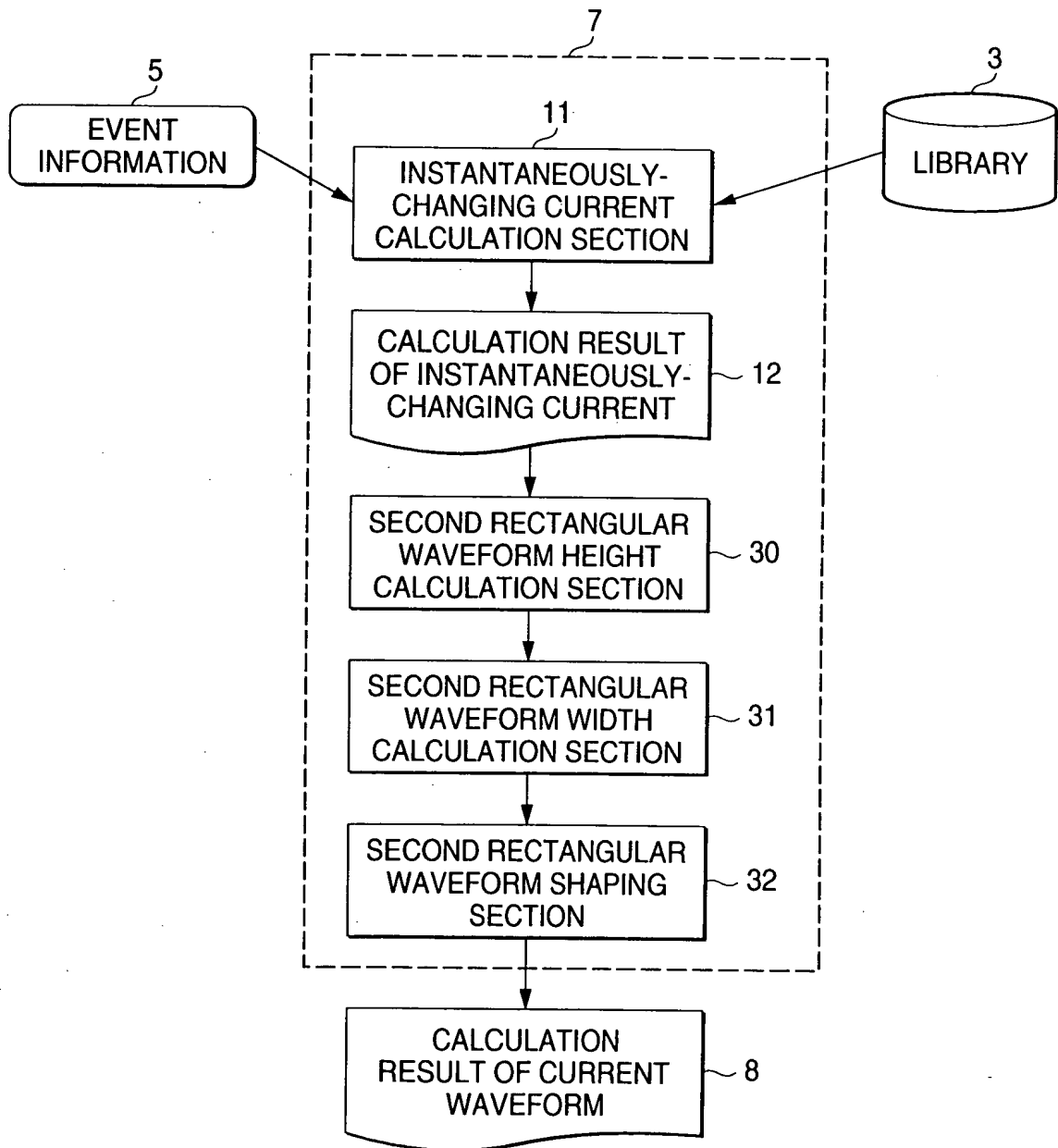




9/94

FIG. 12

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (THIRD EMBODIMENT)

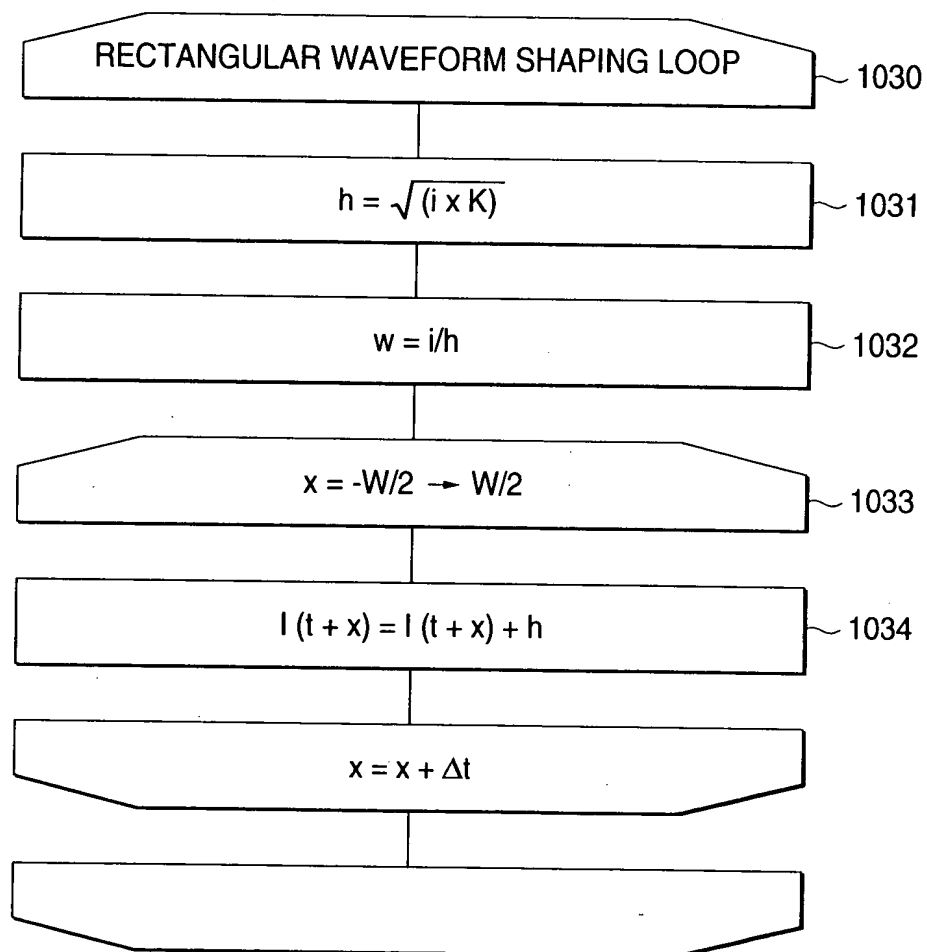


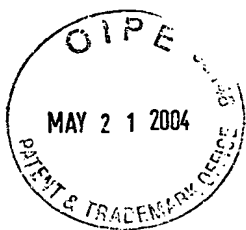


10/94

FIG. 13

FLOWCHART OF SECOND RECTANGULAR WAVEFORM SHAPING OPERATION

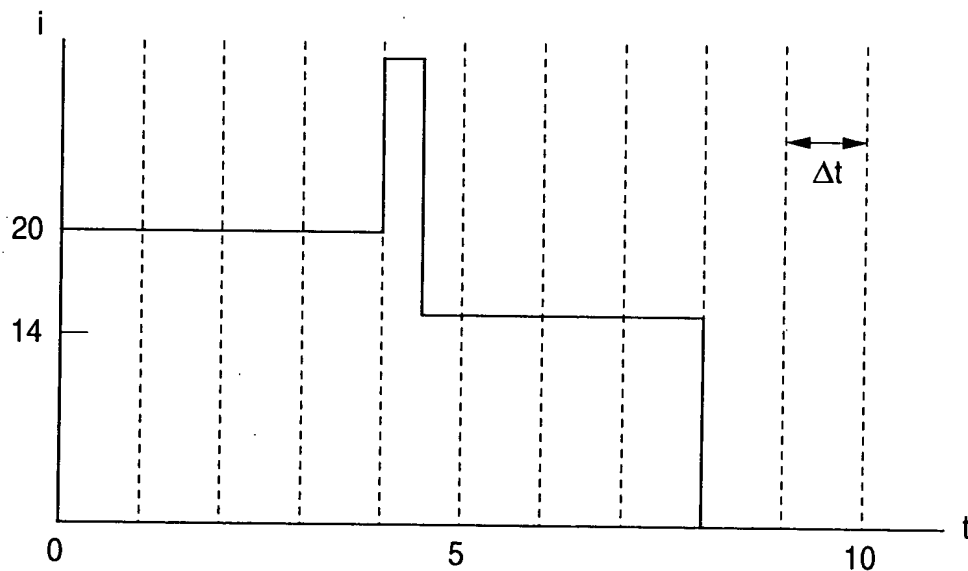




11/94

FIG. 14

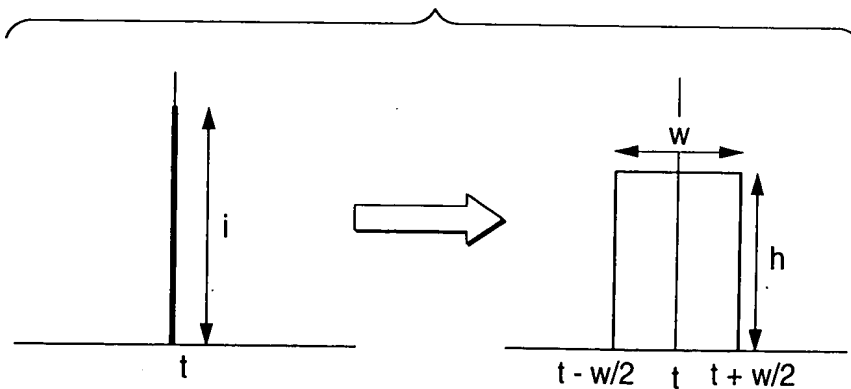
CALCULATION RESULT OF CURRENT WAVEFORM (THIRD EMBODIMENT)



AT $K = 4$

FIG. 15

RECTANGULAR WAVEFORM MODEL
(FOURTH, FIFTH AND SIXTH EMBODIMENTS)



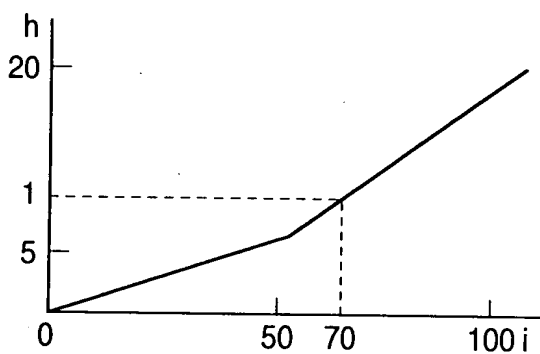


12/94

FIG. 16

i-h TABLE

i	h
0	0
50	5
100	20



IN THE CASE OF $i = 70$

$(i_1, h_1) = (50, 5)$

$(i_2, h_2) = (100, 20)$

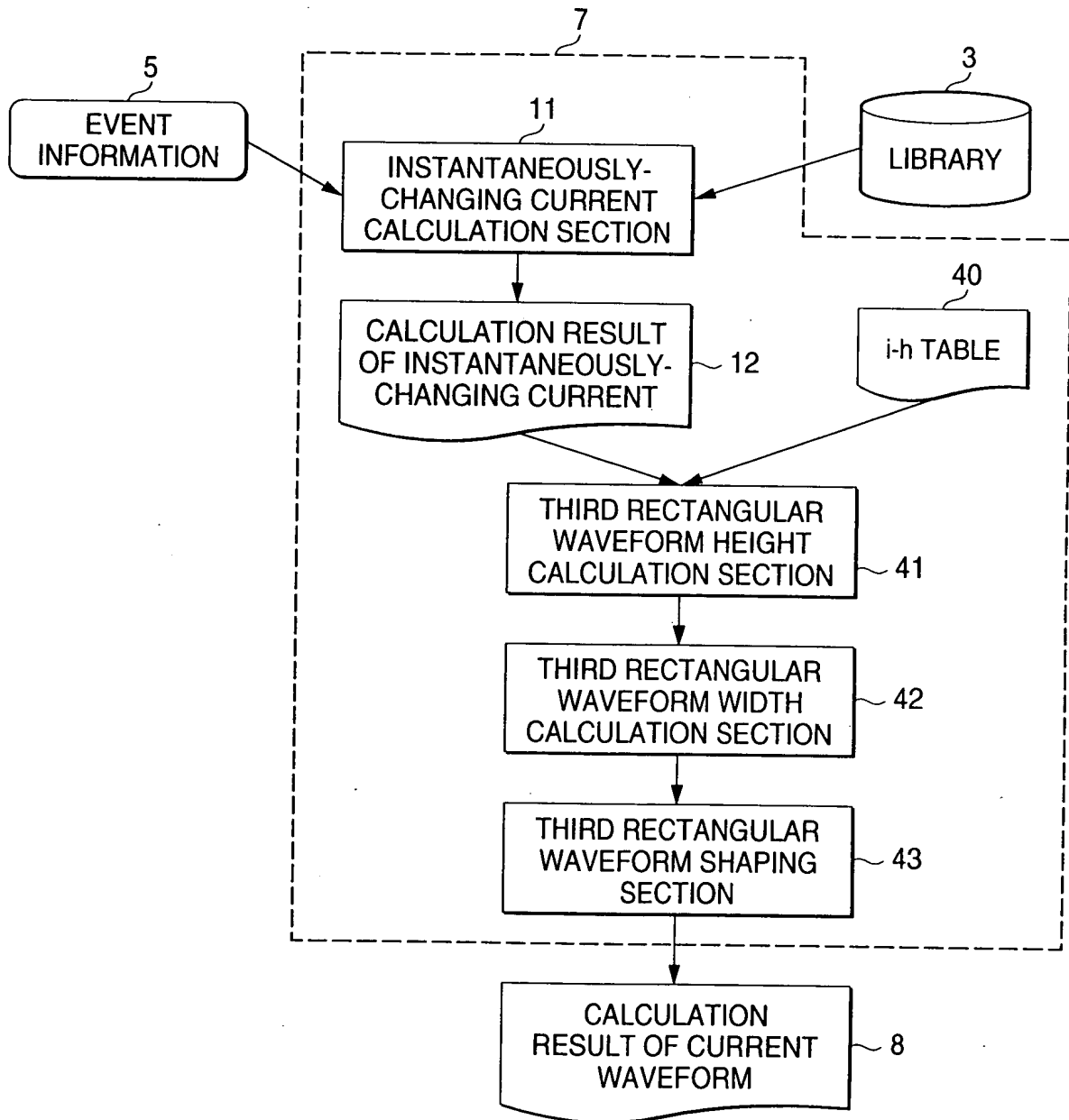
$$h(i) = \frac{h_2 - h_1}{i_2 - i_1} (i - i_1) + h_1$$

$$h(70) = 11$$



FIG. 17

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (FOURTH EMBODIMENT)

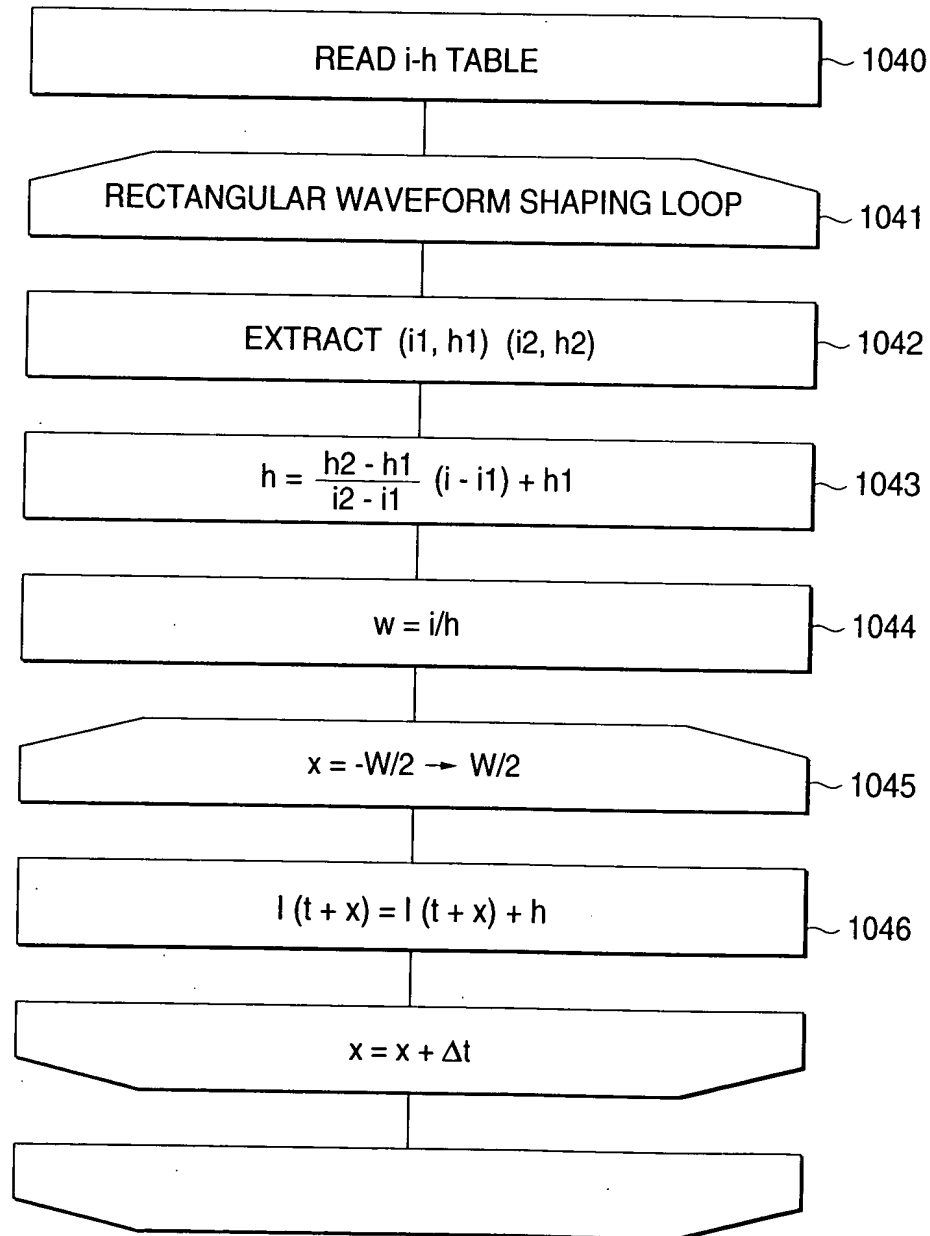




14/94

FIG. 18

FLOWCHART OF THIRD RECTANGULAR WAVEFORM SHAPING OPERATION





15/94

FIG. 19

CALCULATION RESULT OF CURRENT WAVEFORM (FOURTH EMBODIMENT)

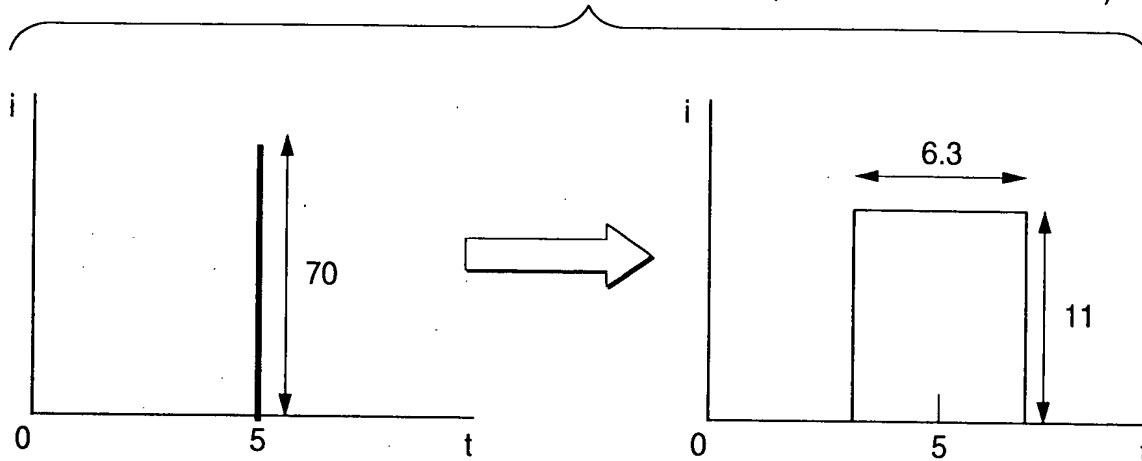
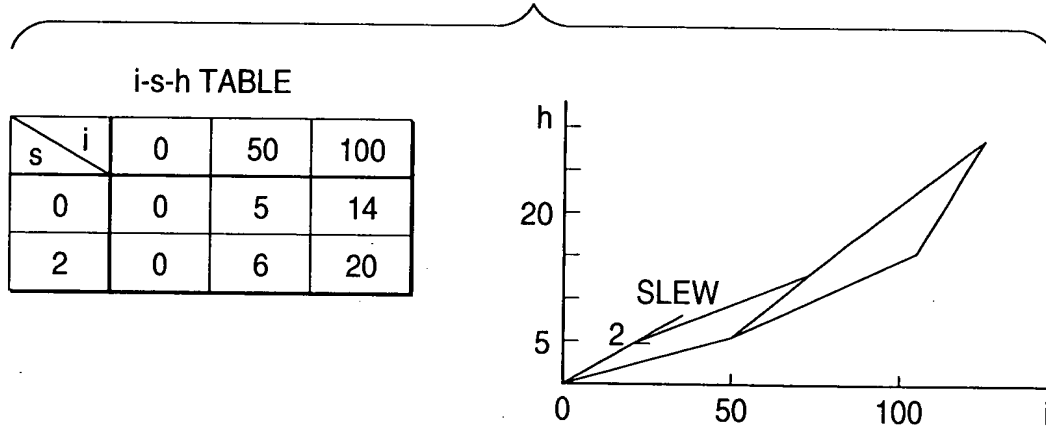


FIG. 20

i-s-h TABLE



IN THE CASE OF $i = 70$, $s = 1$

$$s1 = 0, s2 = 2, i1 = 50, i2 = 100$$

$$h(s1, i1) = 5, h(s1, i2) = 14$$

$$h(s2, i1) = 6, h(s2, i2) = 20$$

$$h(s, i) = \left(\frac{h(s1, i1)(s2 - s)}{(s2 - s1)} + \frac{h(s2, i1)(s - s1)}{(s2 - s1)} \right) \left(\frac{i2 - i}{i2 - i1} \right) + \left(\frac{h(s1, i2)(s2 - s)}{(s2 - s1)} + \frac{h(s2, i2)(s - s1)}{(s2 - s1)} \right) \left(\frac{i - i1}{i2 - i1} \right)$$

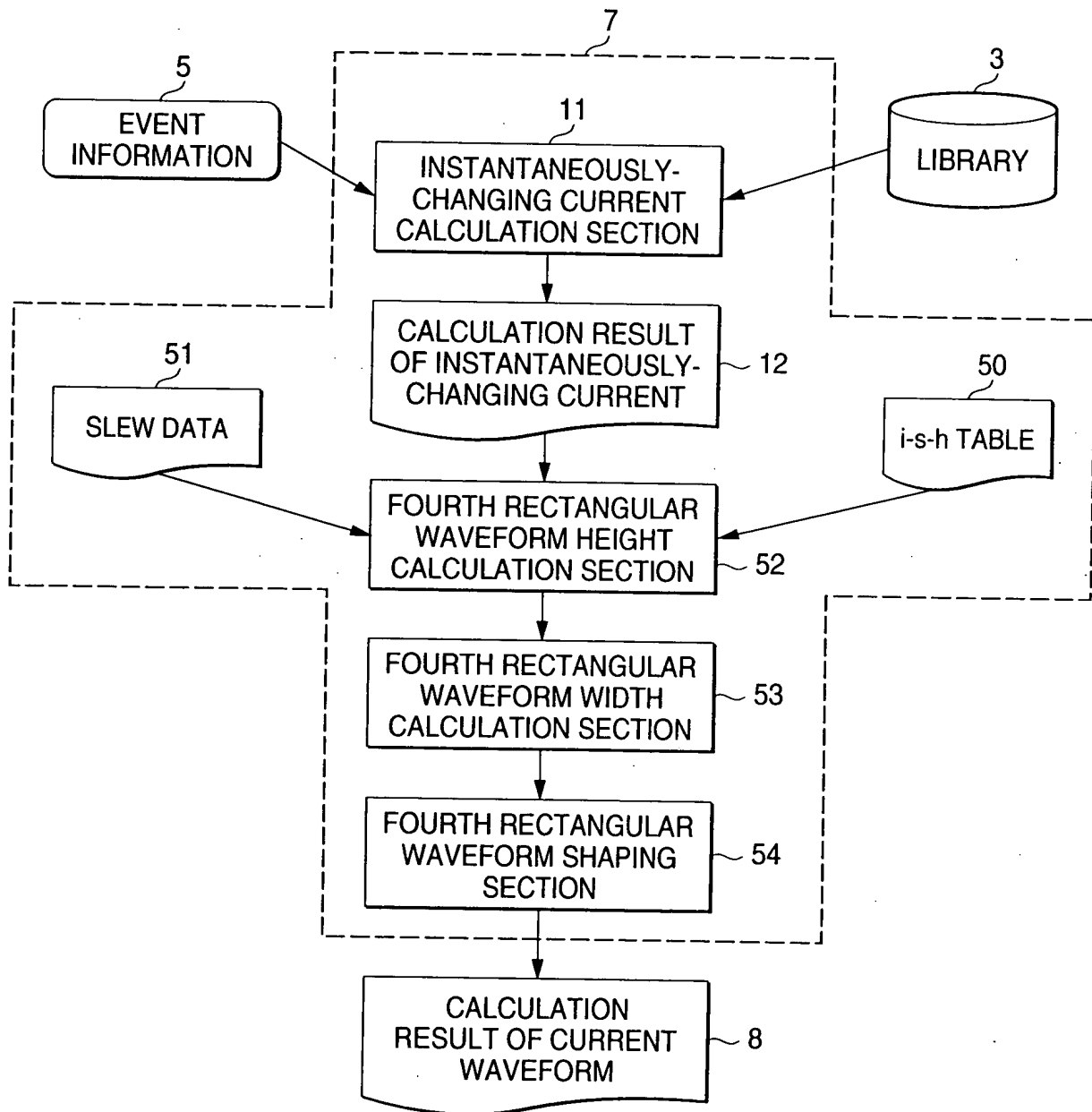
$$h(1, 70) = 10.1$$



16/94

FIG. 21

**BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (FIFTH EMBODIMENT)**





17/94

FIG. 22

FLOWCHART OF FOURTH RECTANGULAR WAVEFORM SHAPING OPERATION

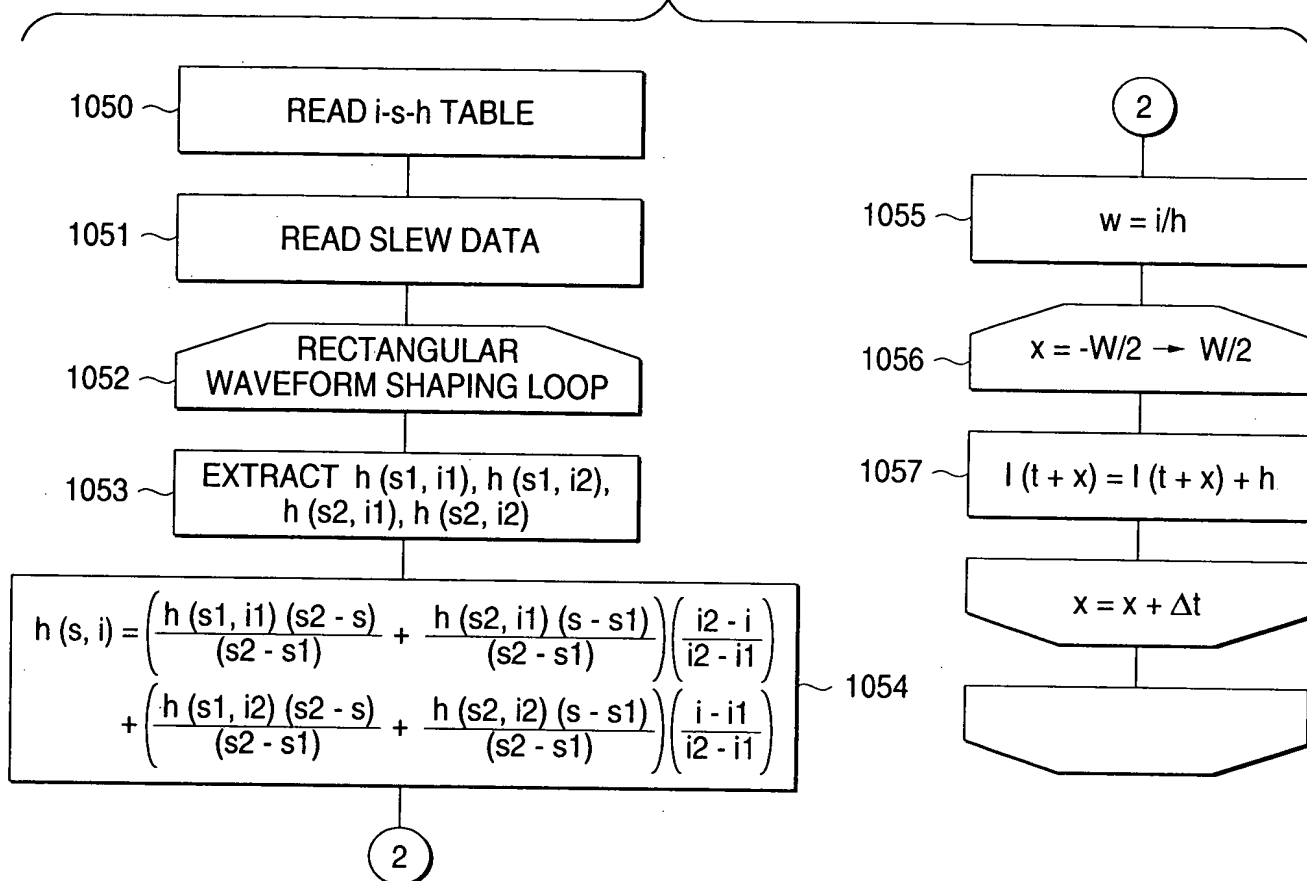
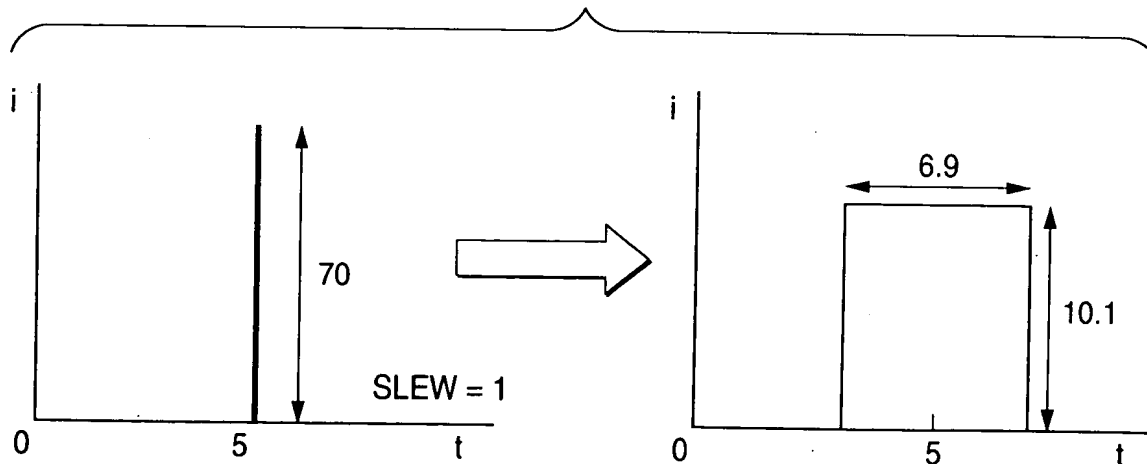


FIG. 23

CALCULATION RESULT OF CURRENT WAVEFORM (FIFTH EMBODIMENT)



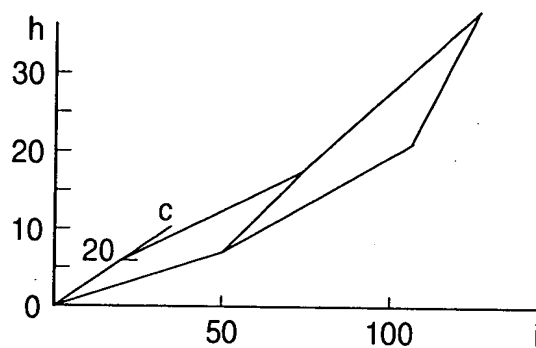


18/94

FIG. 24

i-c-h TABLE

$\begin{matrix} c \\ i \end{matrix}$	0	50	100
0	0	5	20
20	0	8	25



IN THE CASE OF $i = 70, c = 10$

$c1 = 0, c2 = 20, i1 = 50, i2 = 100$

$h(c1, i1) = 5, h(c1, i2) = 20$

$h(c2, i1) = 8, h(c2, i2) = 25$

$$h(c, i) = \left(\frac{h(c1, i1)(c2 - c)}{(c2 - c1)} + \frac{h(c2, i1)(c - c1)}{(c2 - c1)} \right) \left(\frac{i2 - i}{i2 - i1} \right) + \left(\frac{h(c1, i2)(c2 - c)}{(c2 - c1)} + \frac{h(c2, i2)(c - c1)}{(c2 - c1)} \right) \left(\frac{i - i1}{i2 - i1} \right)$$

$$h(10, 70) = 12.9$$



19/94

FIG. 25

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (SIXTH EMBODIMENT)

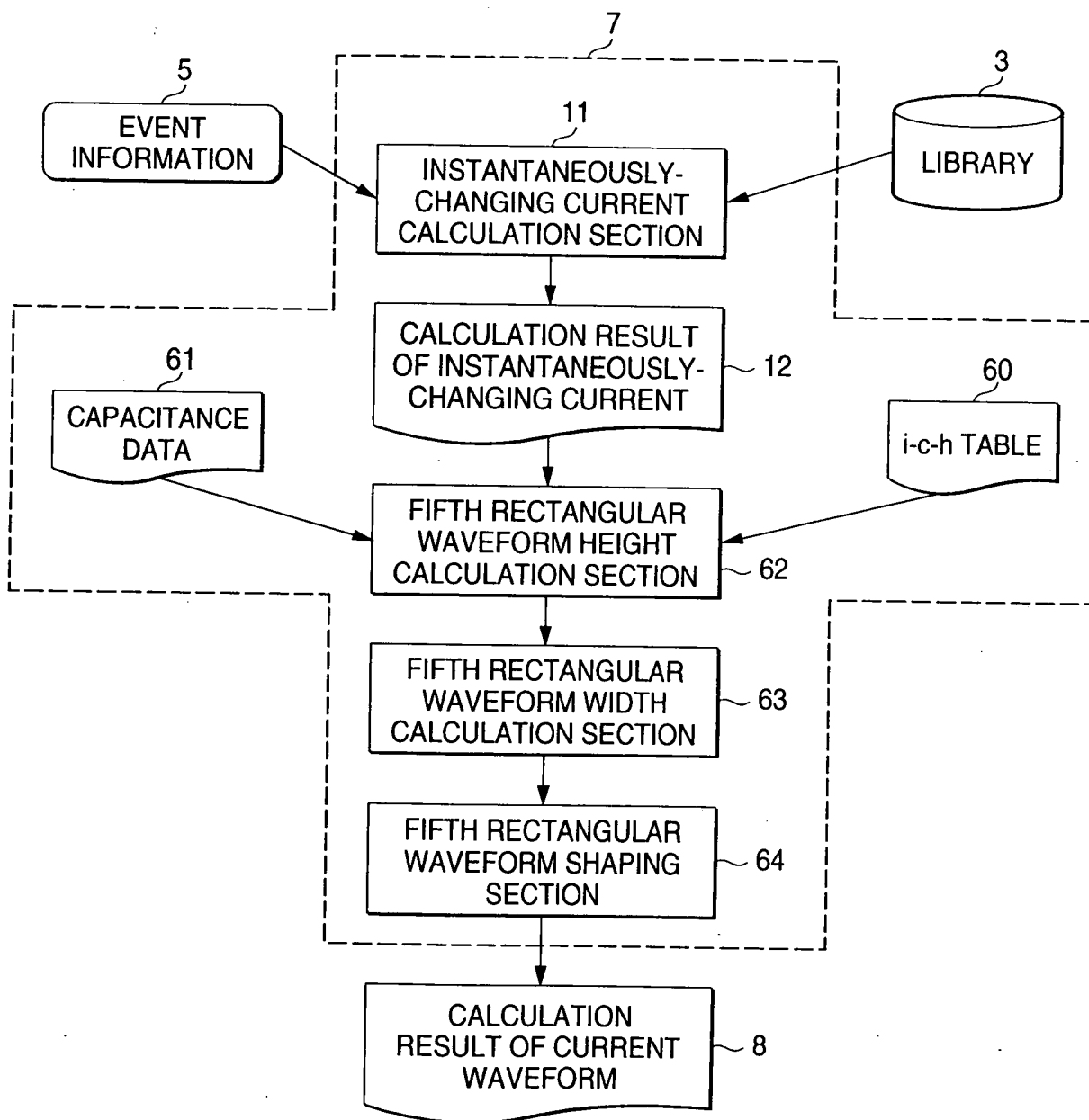


FIG. 26

FLOWCHART OF FIFTH RECTANGULAR WAVEFORM SHAPING OPERATION

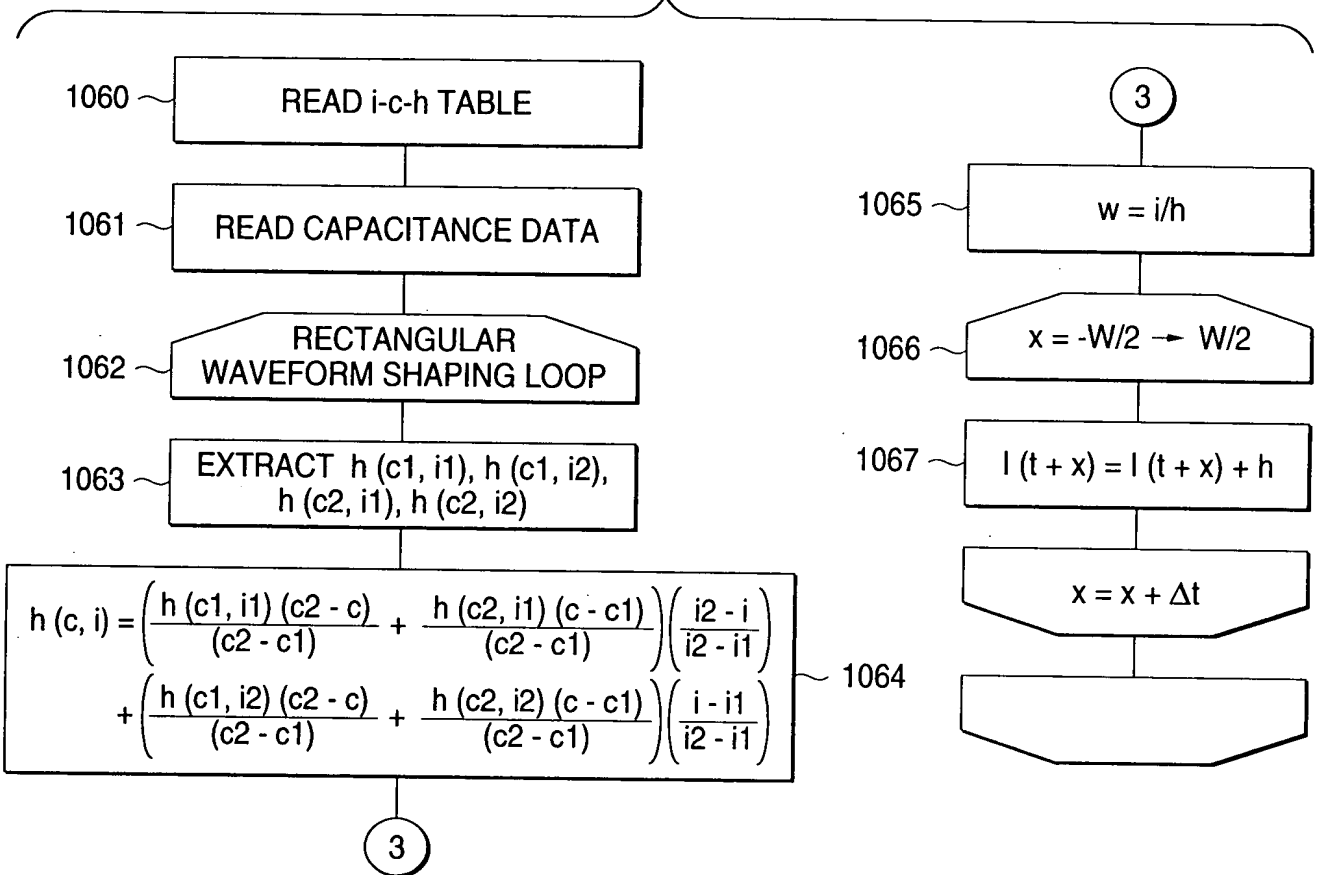
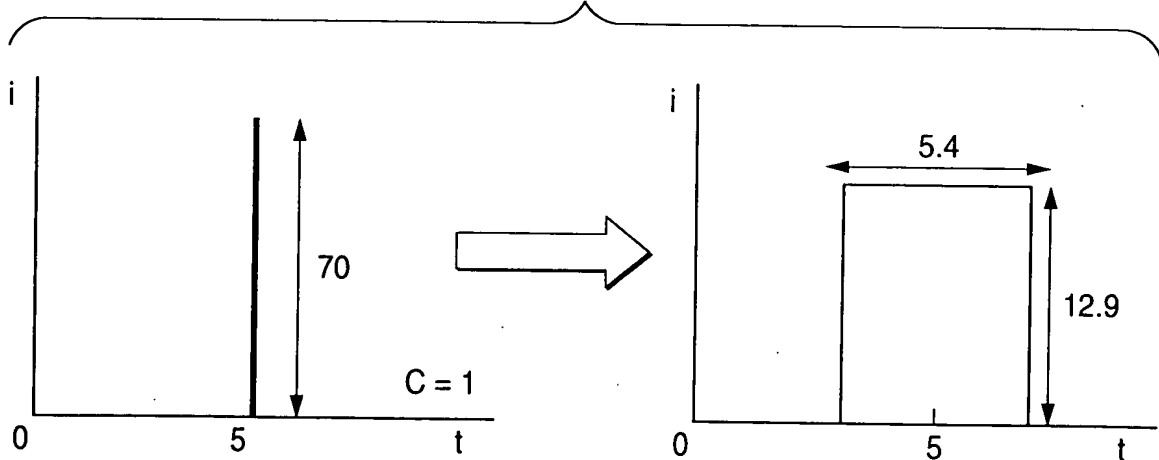


FIG. 27

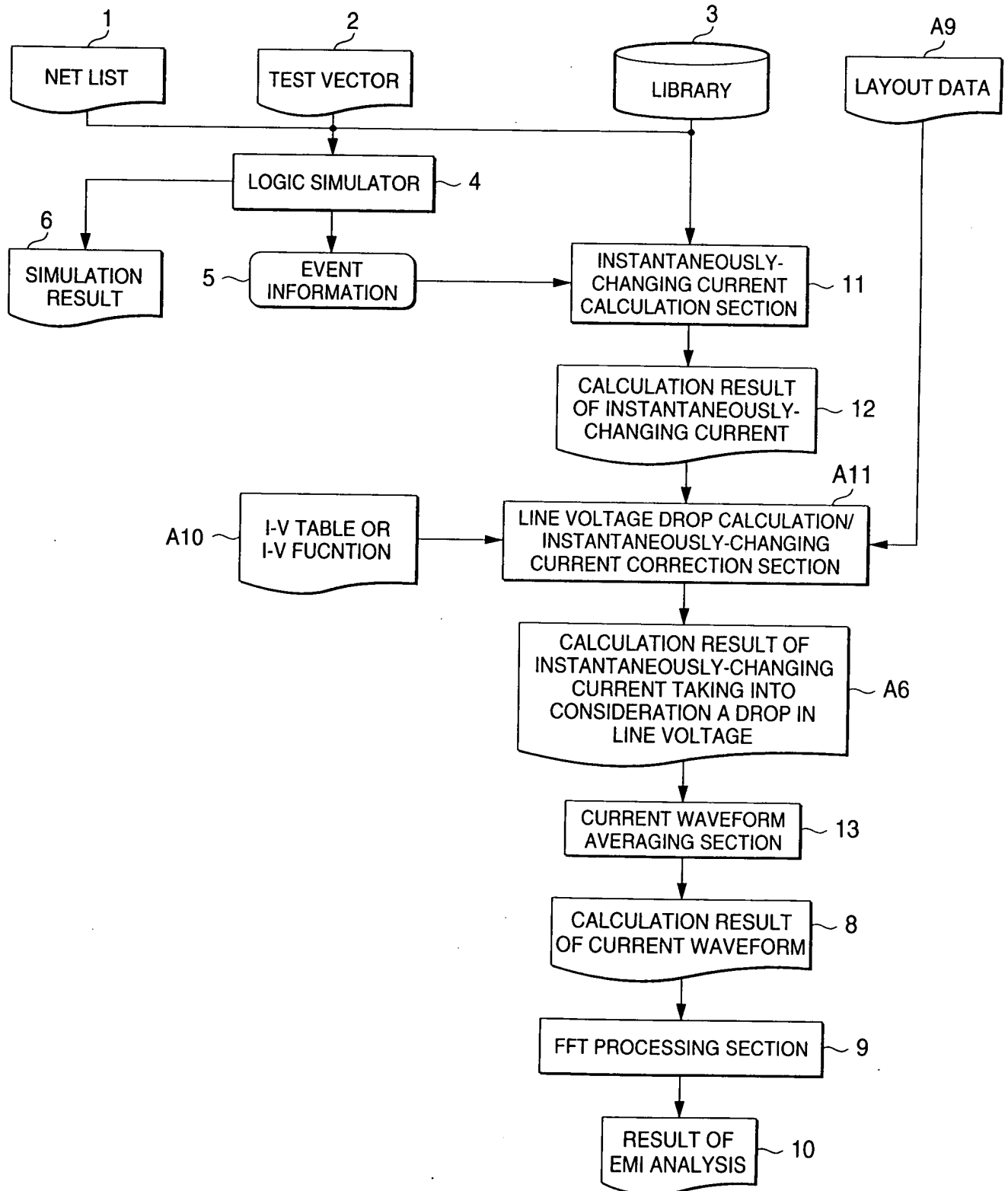
CALCULATION RESULT OF CURRENT WAVEFORM (SIXTH EMBODIMENT)





21/94

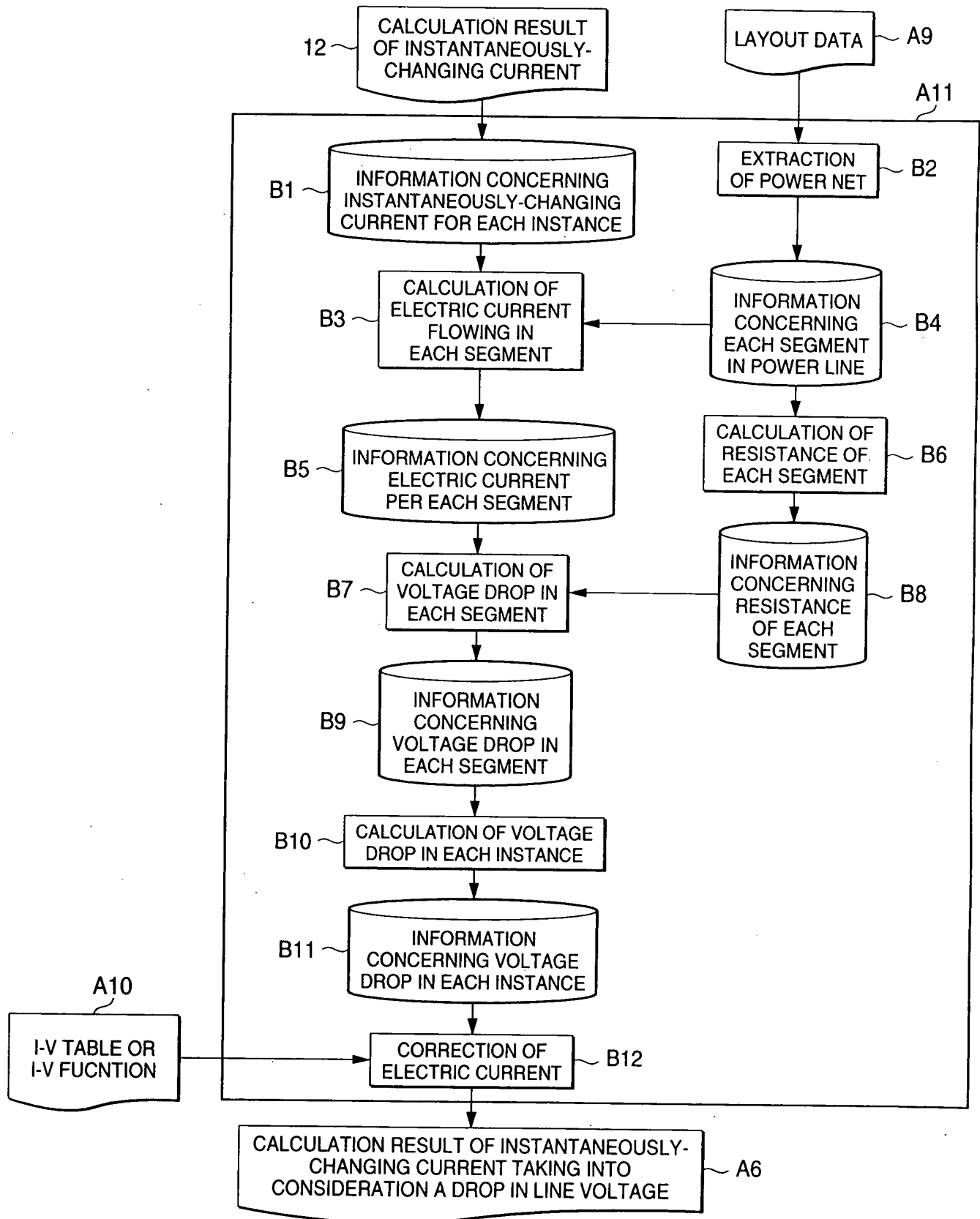
FIG. 28





22/94

FIG. 29





23/94

FIG. 30

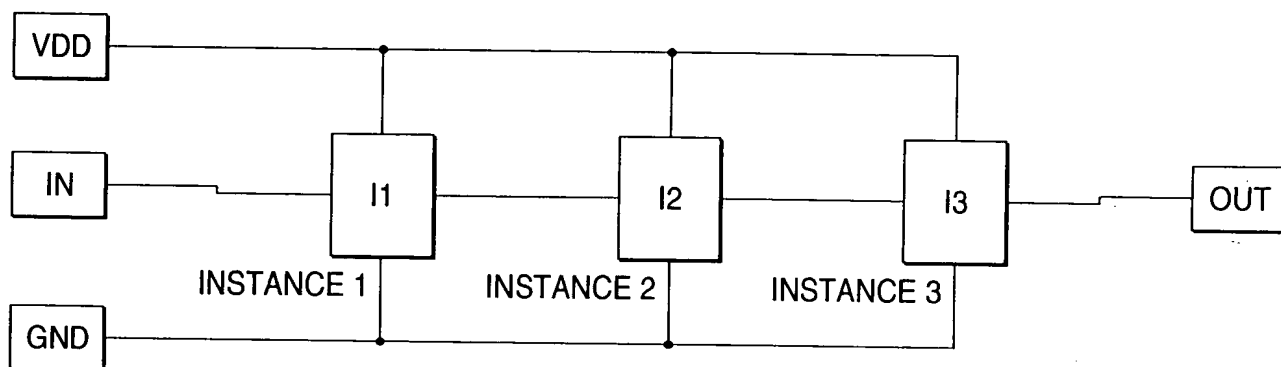


FIG. 31

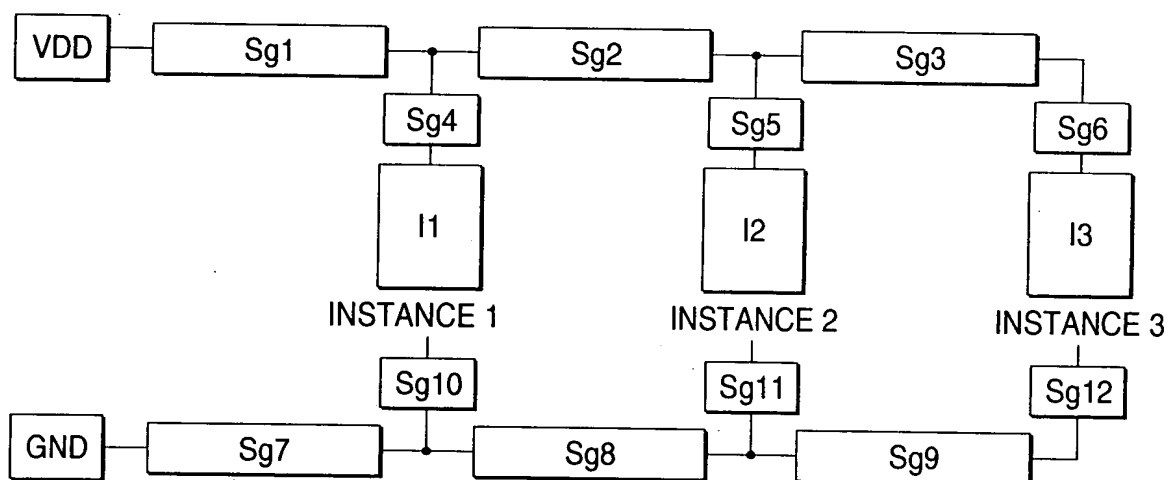
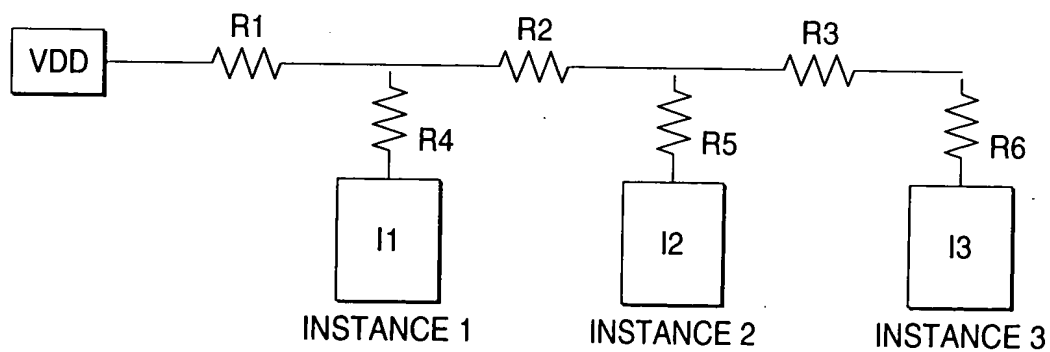


FIG. 32



24/94

FIG. 33

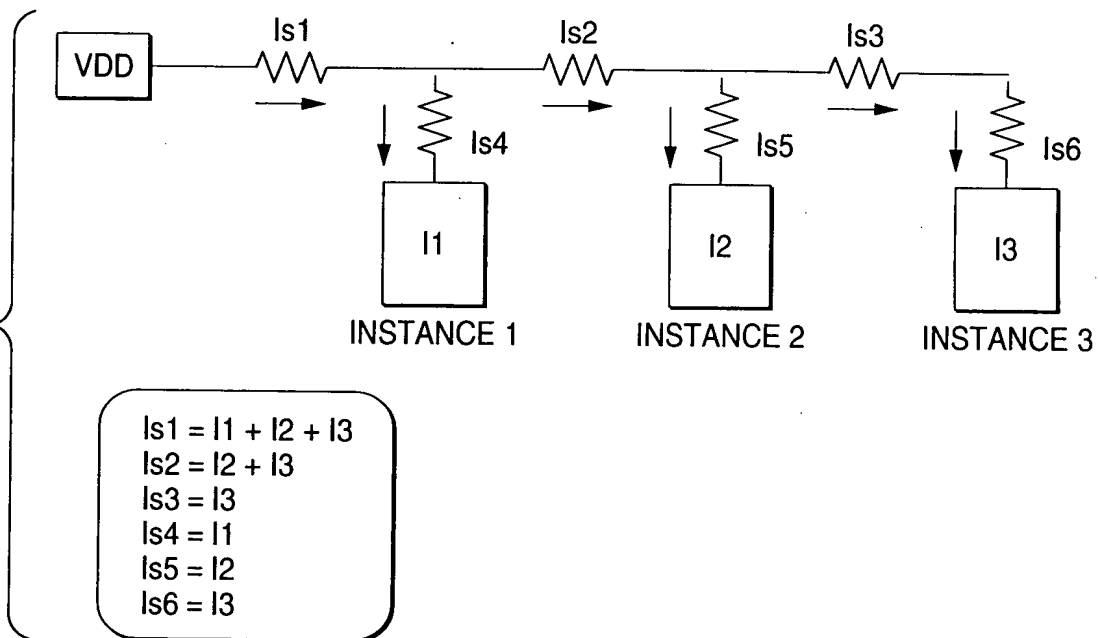
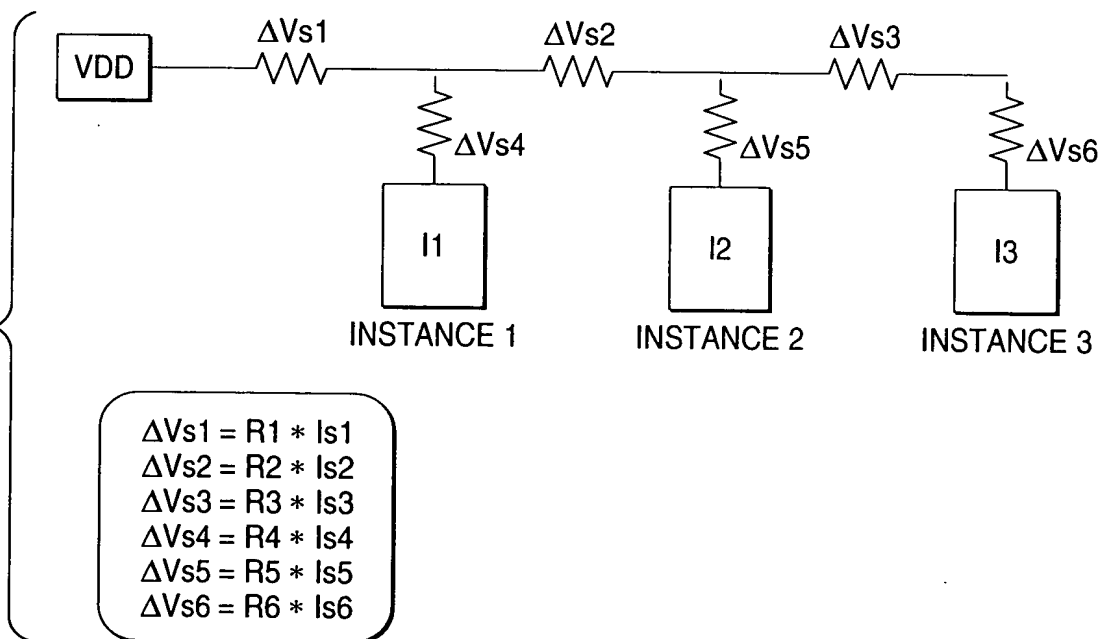


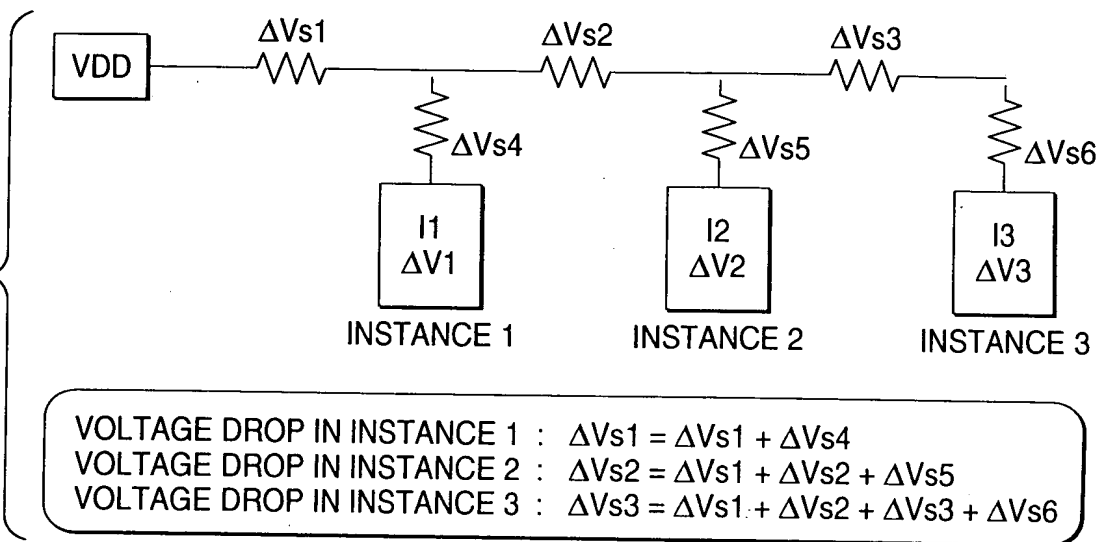
FIG. 34





25/94

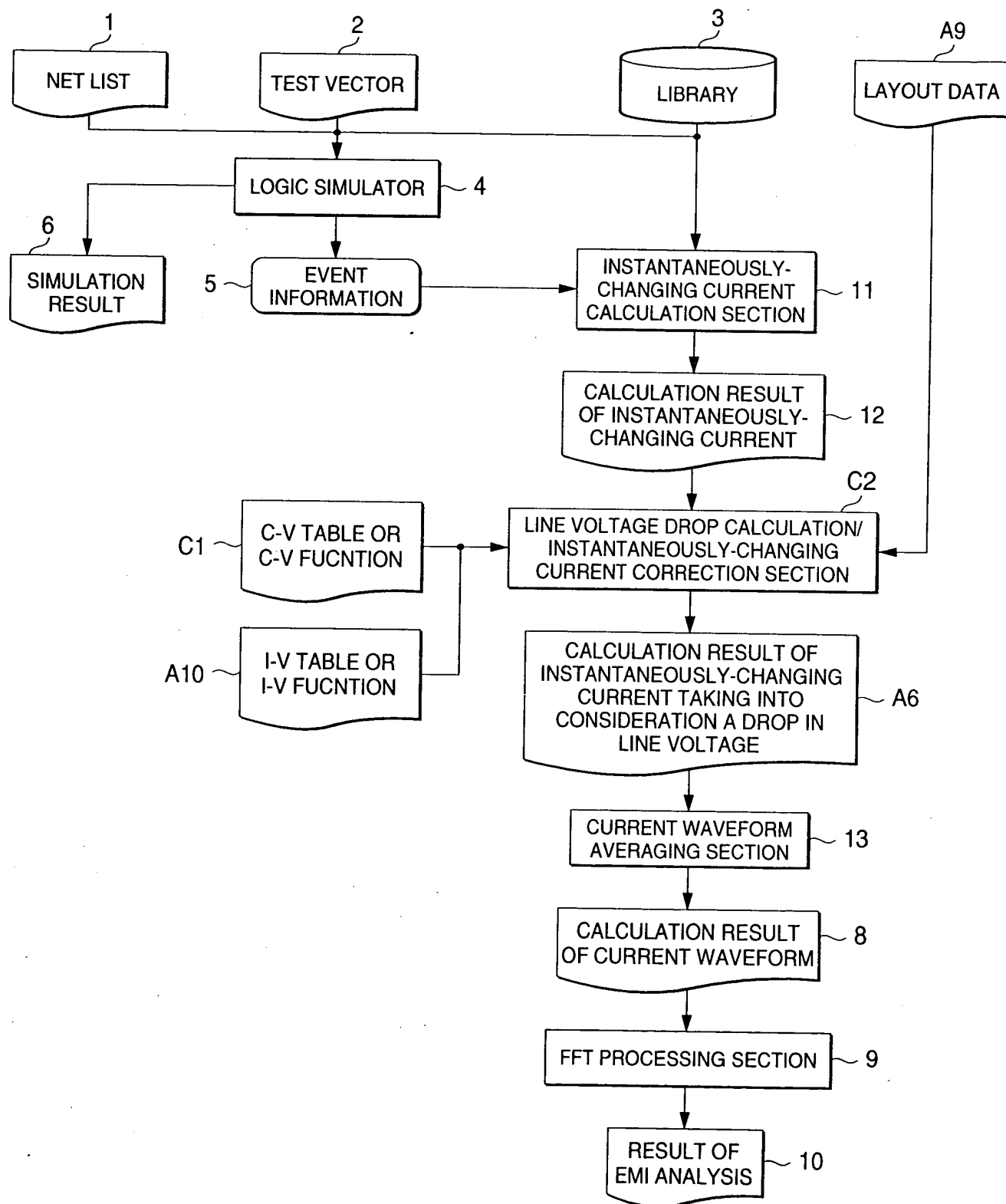
FIG. 35





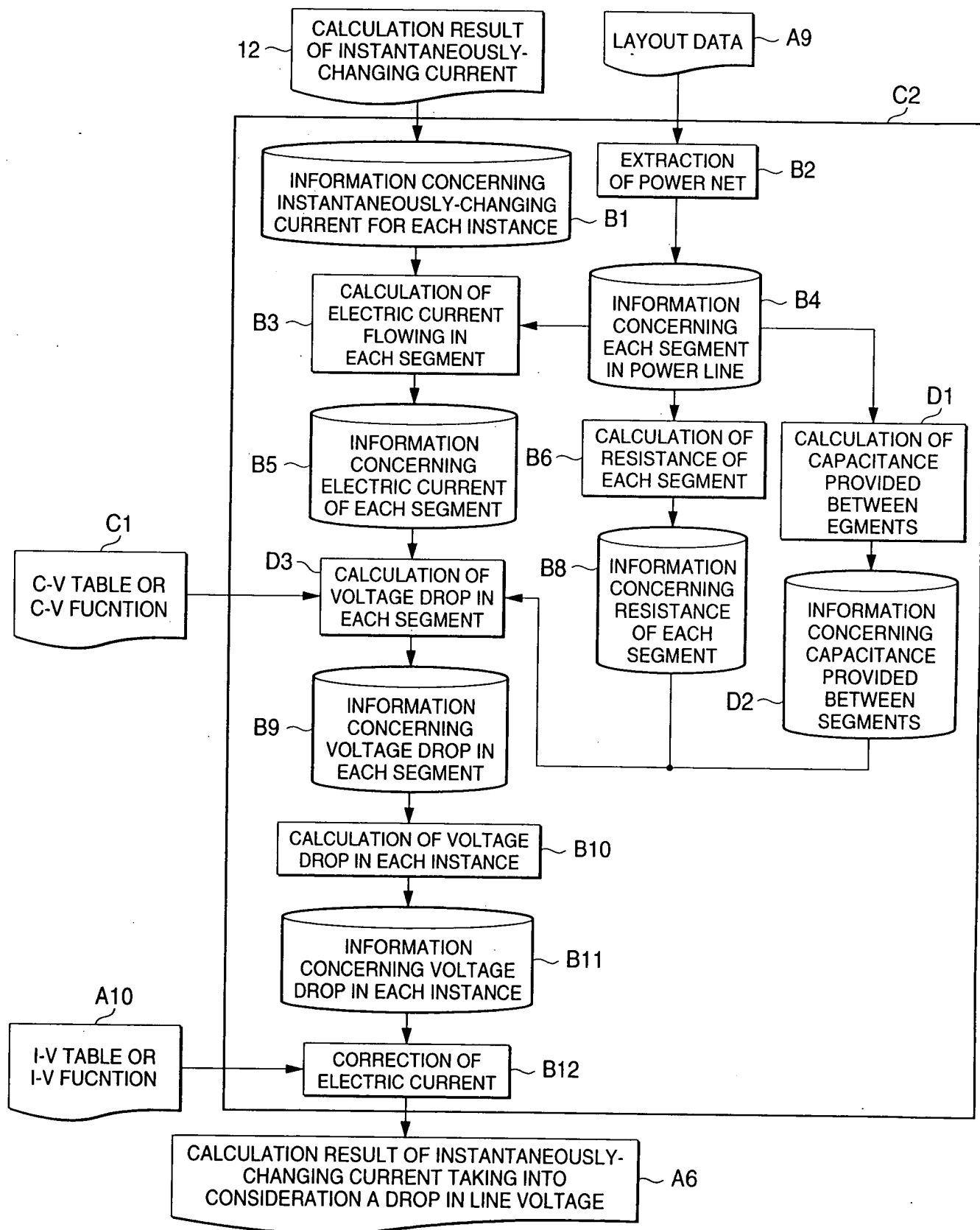
26/94

FIG. 36



27/94

FIG. 37





28/94

FIG. 38

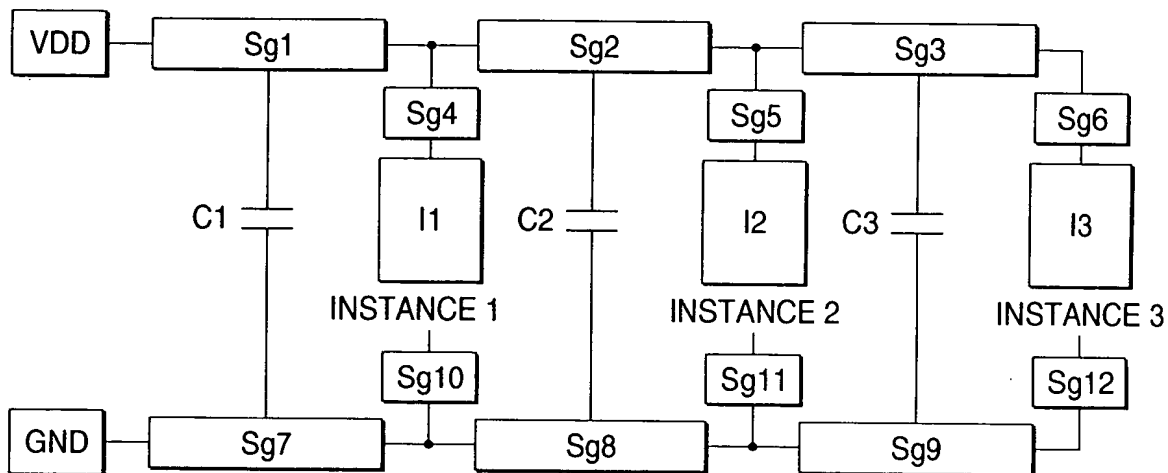
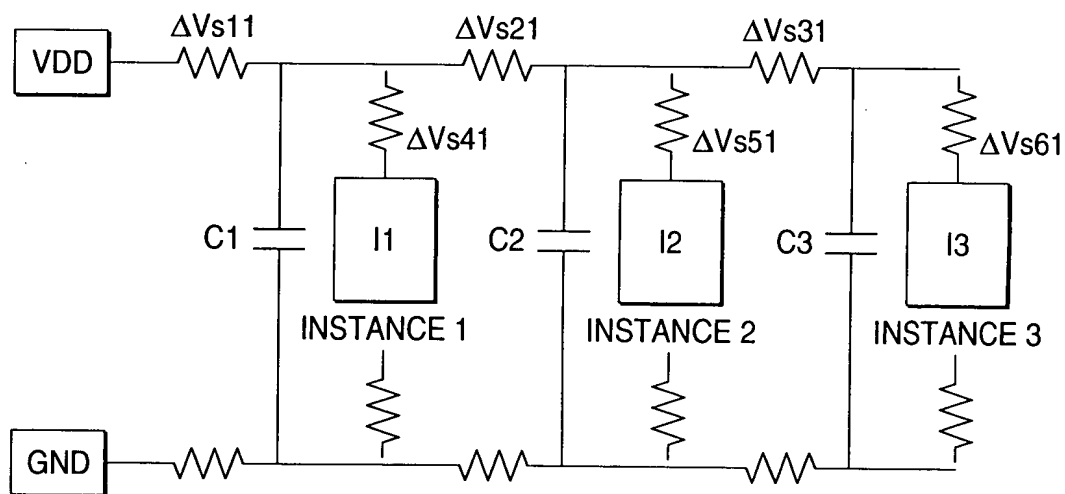


FIG. 39



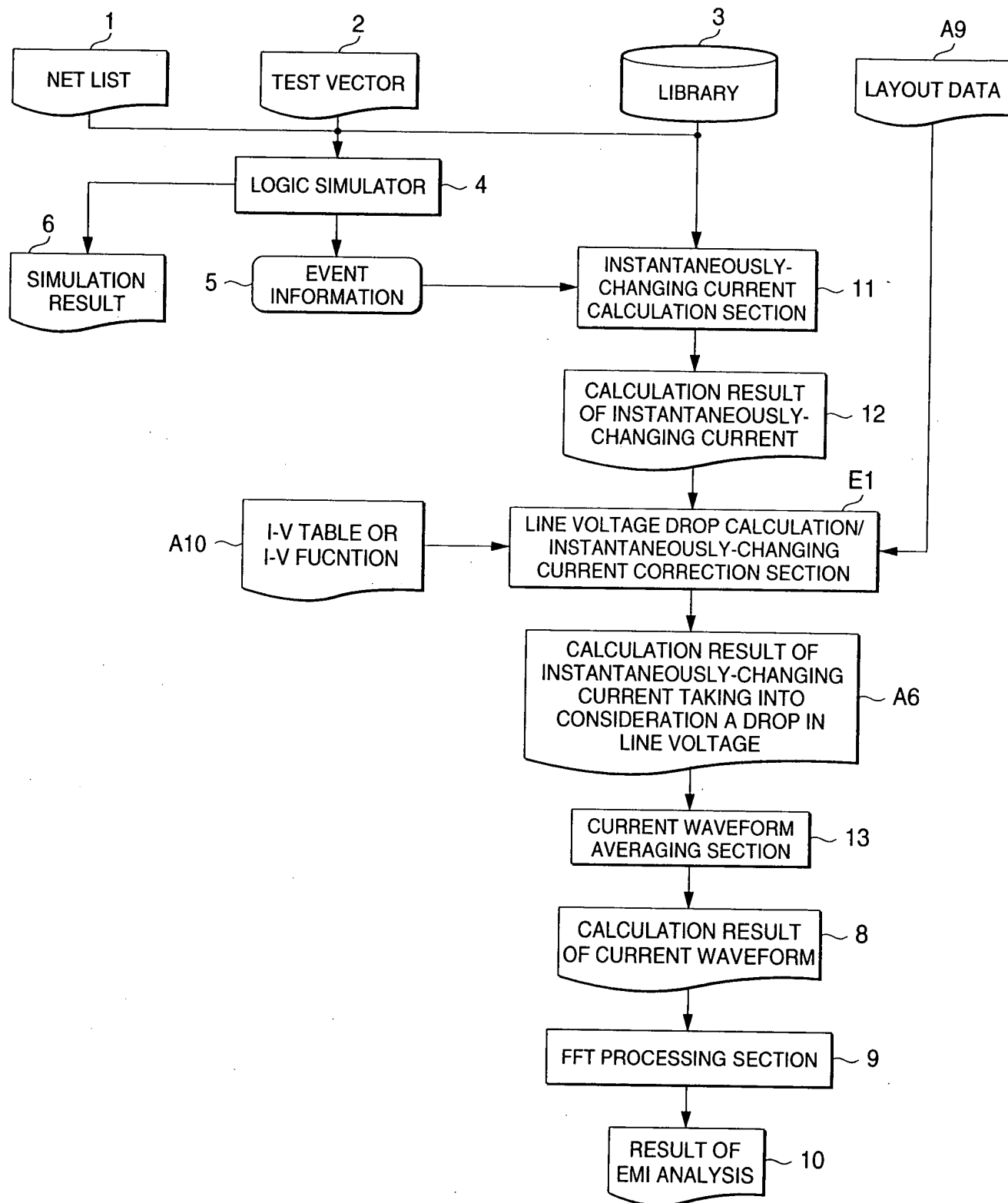
$$\begin{aligned}\Delta V_{s11} &= f(C1, \Delta V_{s1}) \\ \Delta V_{s21} &= f(C2, \Delta V_{s2}) \\ \Delta V_{s31} &= f(C3, \Delta V_{s3}) \\ \Delta V_{s41} &= \Delta V_{s4} \\ \Delta V_{s51} &= \Delta V_{s5} \\ \Delta V_{s61} &= \Delta V_{s6}\end{aligned}$$



VOLTAGE DROP IN INSTANCE 1 : $\Delta V_{s1} = \Delta V_{s11} + \Delta V_{s41}$
VOLTAGE DROP IN INSTANCE 2 : $\Delta V_{s2} = \Delta V_{s11} + \Delta V_{s21} + \Delta V_{s51}$
VOLTAGE DROP IN INSTANCE 3 : $\Delta V_{s3} = \Delta V_{s11} + \Delta V_{s21} + \Delta V_{s31} + \Delta V_{s61}$

29/94

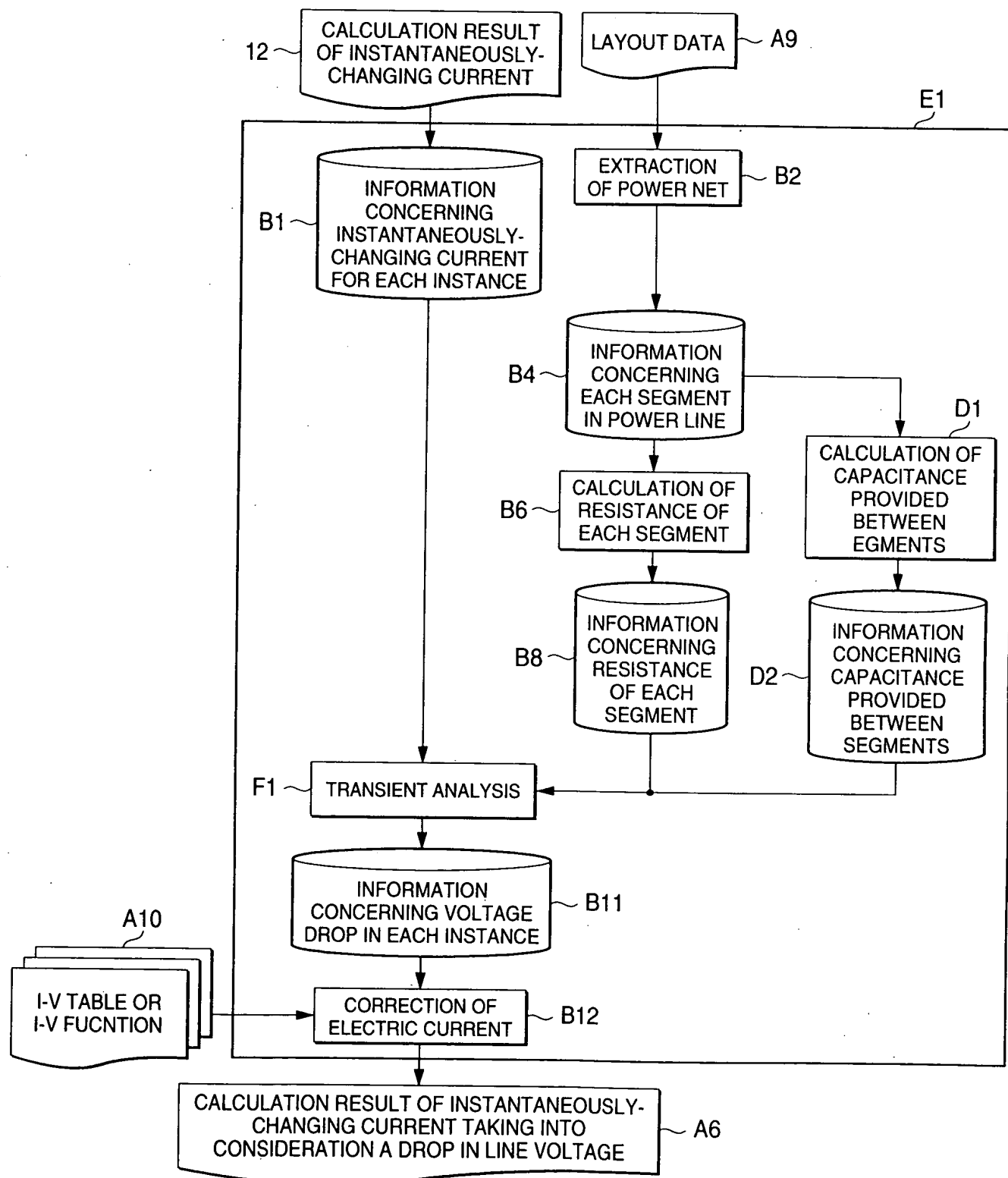
FIG. 40





30/94

FIG. 41

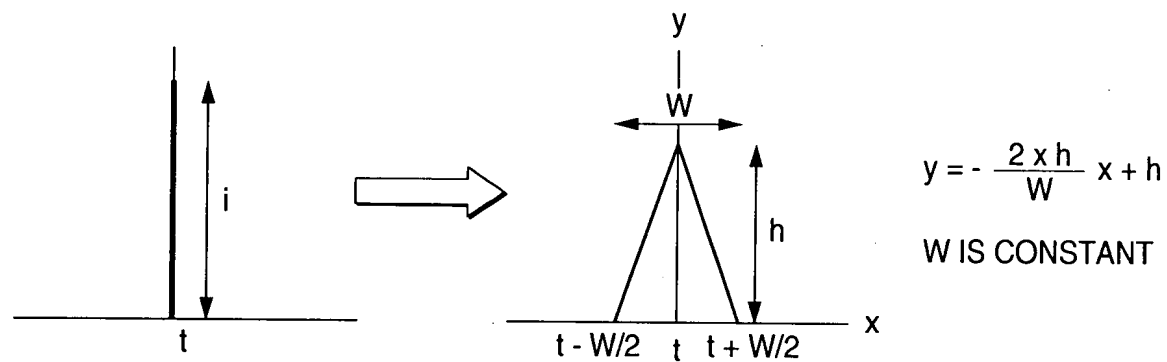


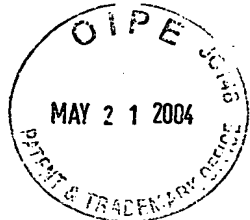


31/94

FIG. 42

TRIANGULAR WAVEFORM MODEL (TENTH EMBODIMENT)





32/94

FIG. 43

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (TENTH EMBODIMENT)

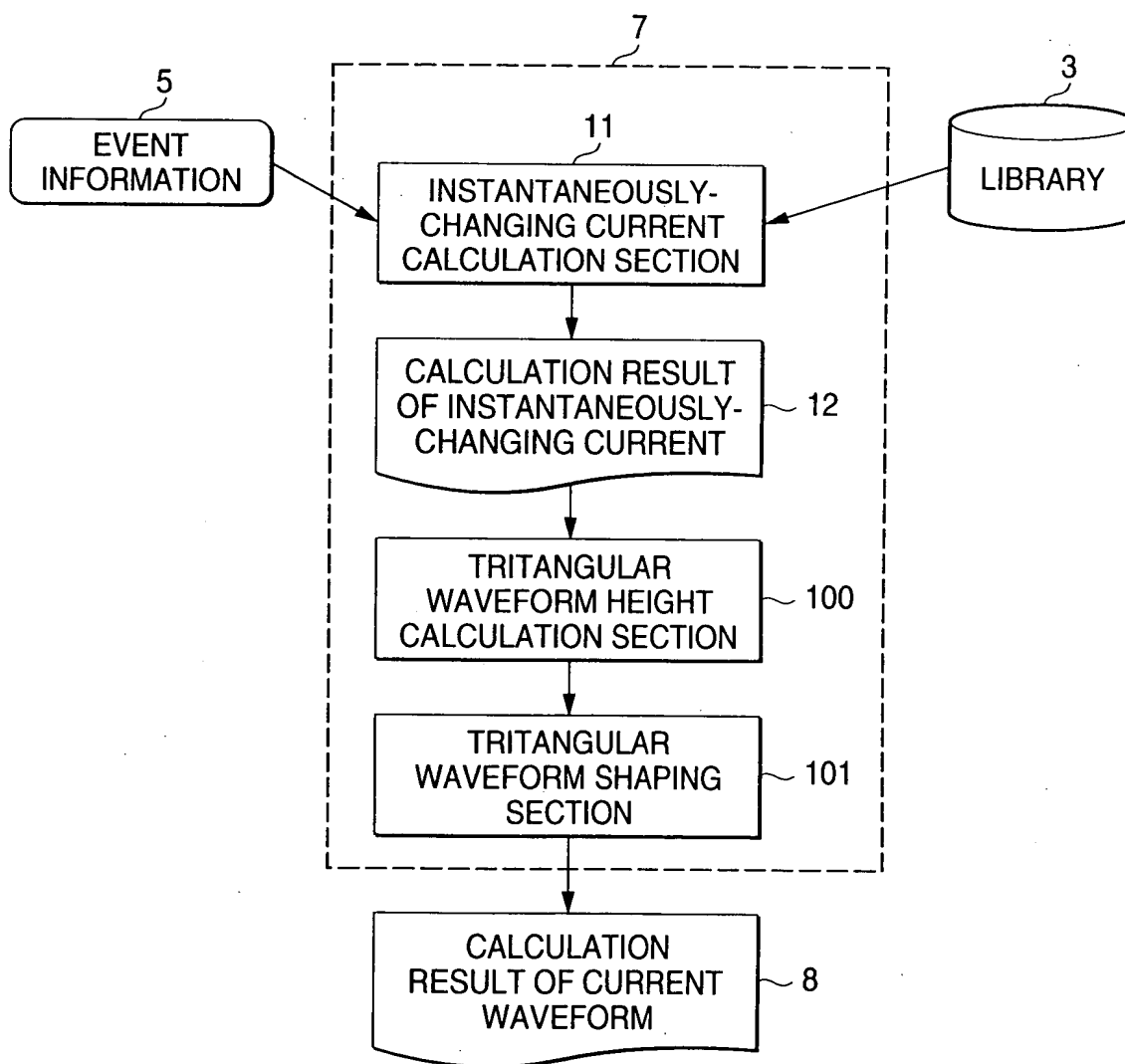
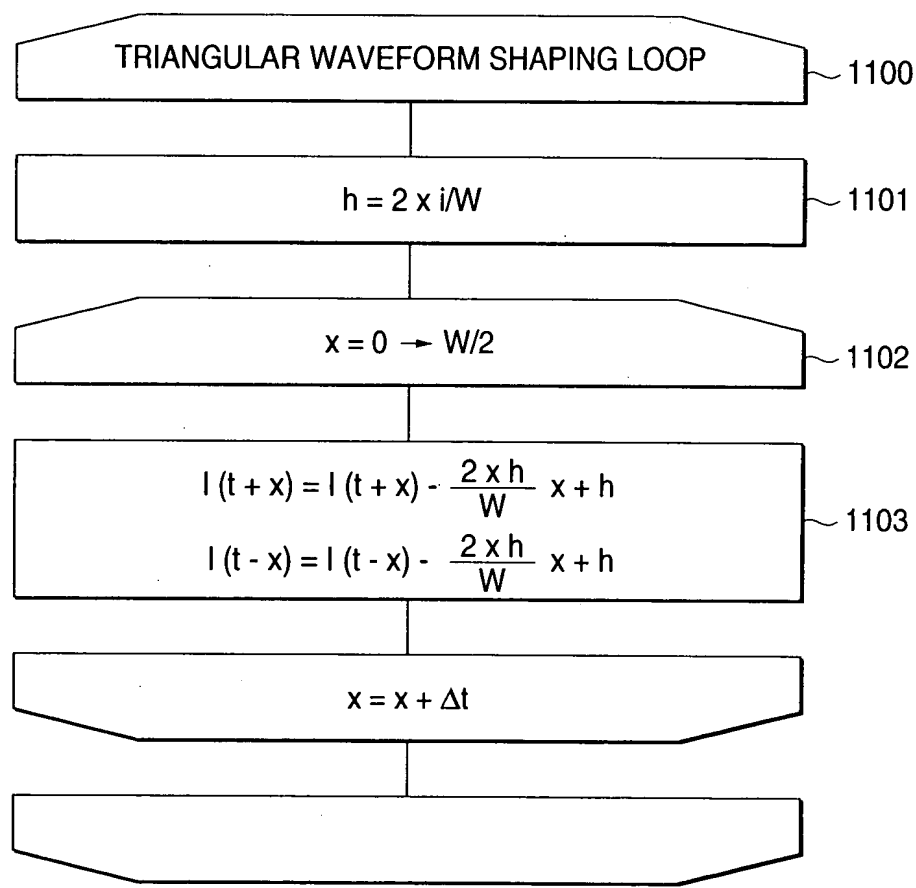




FIG. 44

FLOWCHART OF FIFTH TRIANGULAR WAVEFORM SHAPING OPERATION





34/94

FIG. 45

CALCULATION RESULT OF CURRENT WAVEFORM (TENTH EMBODIMENT)

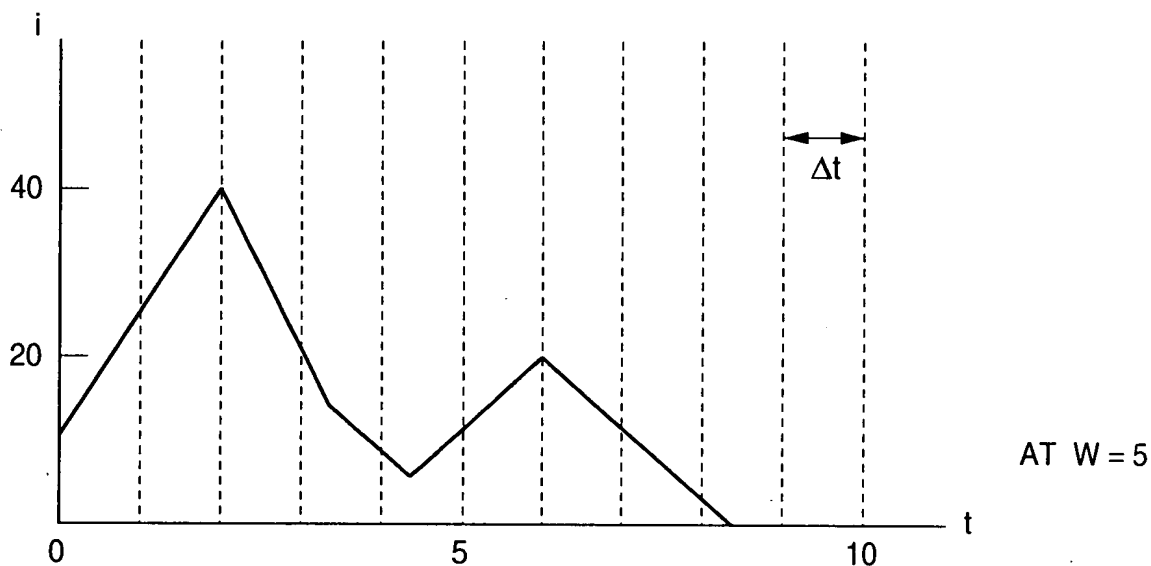


FIG. 46

MULTI-ORDER-FUNCTION MODEL (ELEVENTH EMBODIMENT)

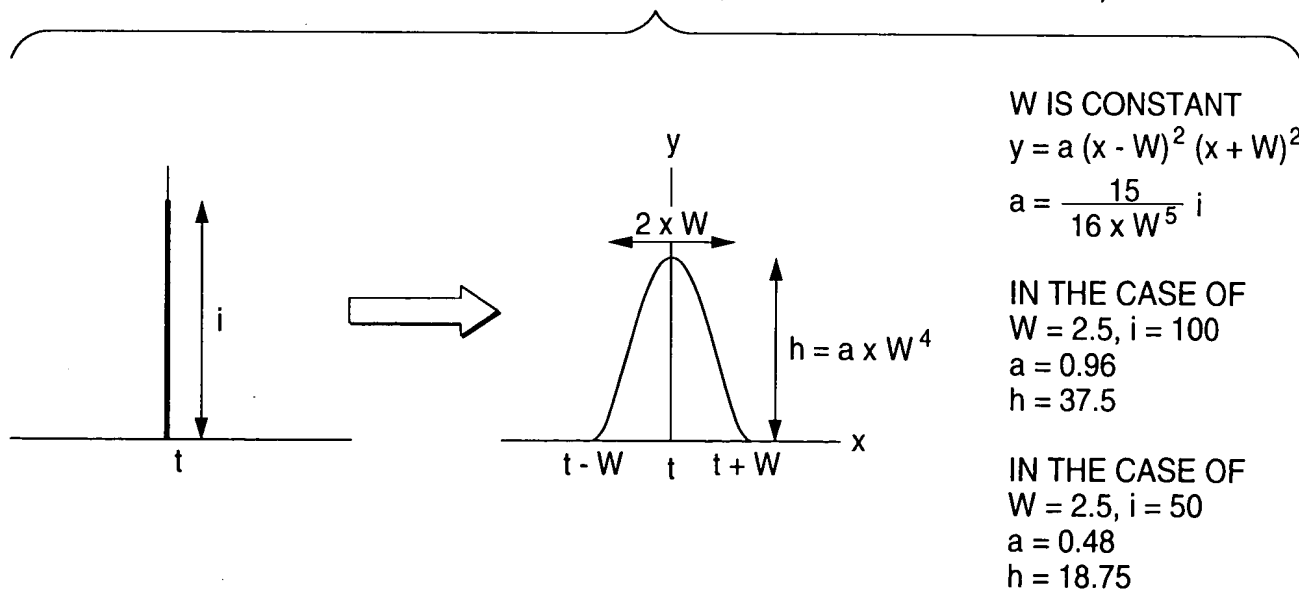




FIG. 47

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (ELEVENTH EMBODIMENT)

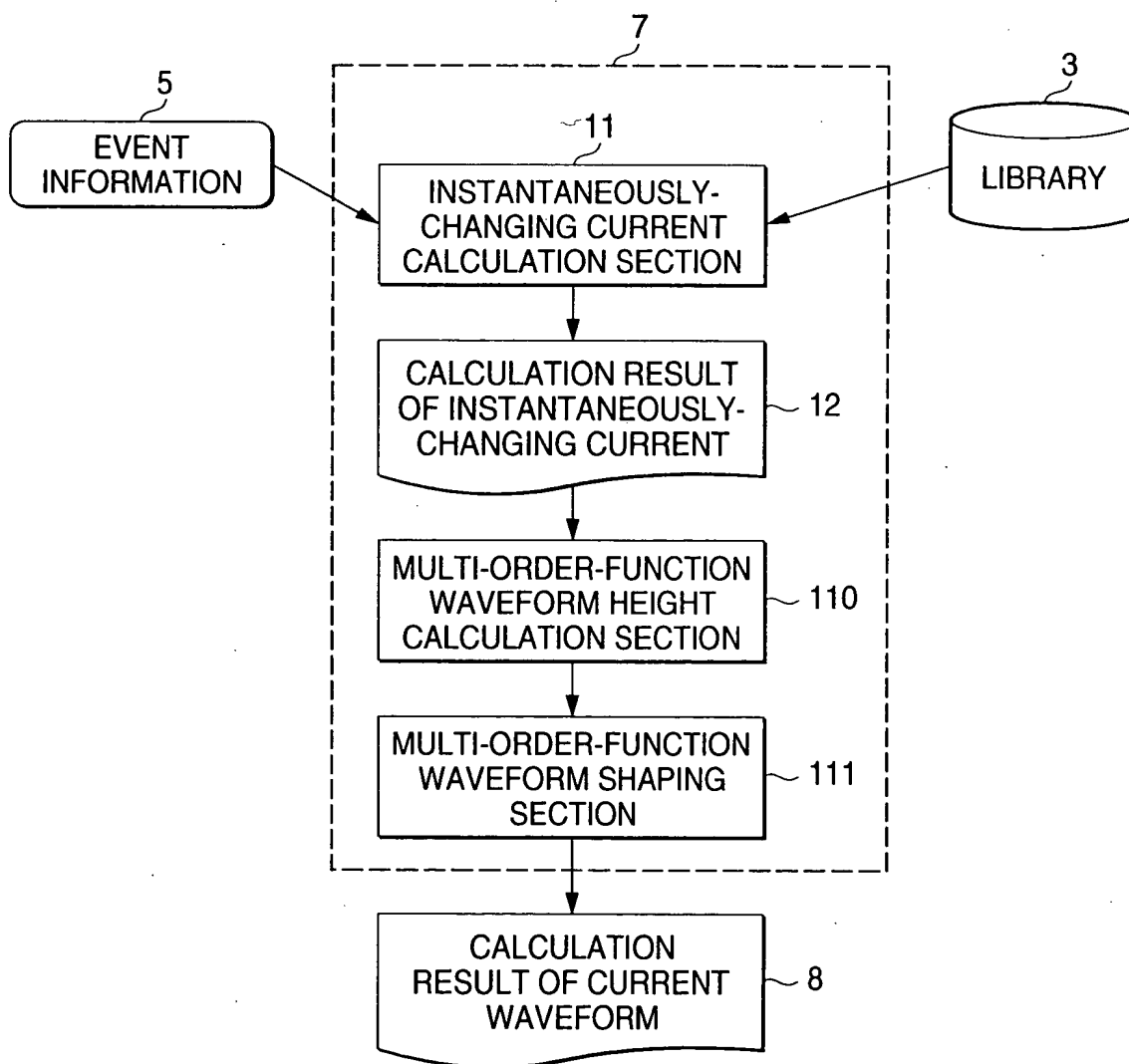
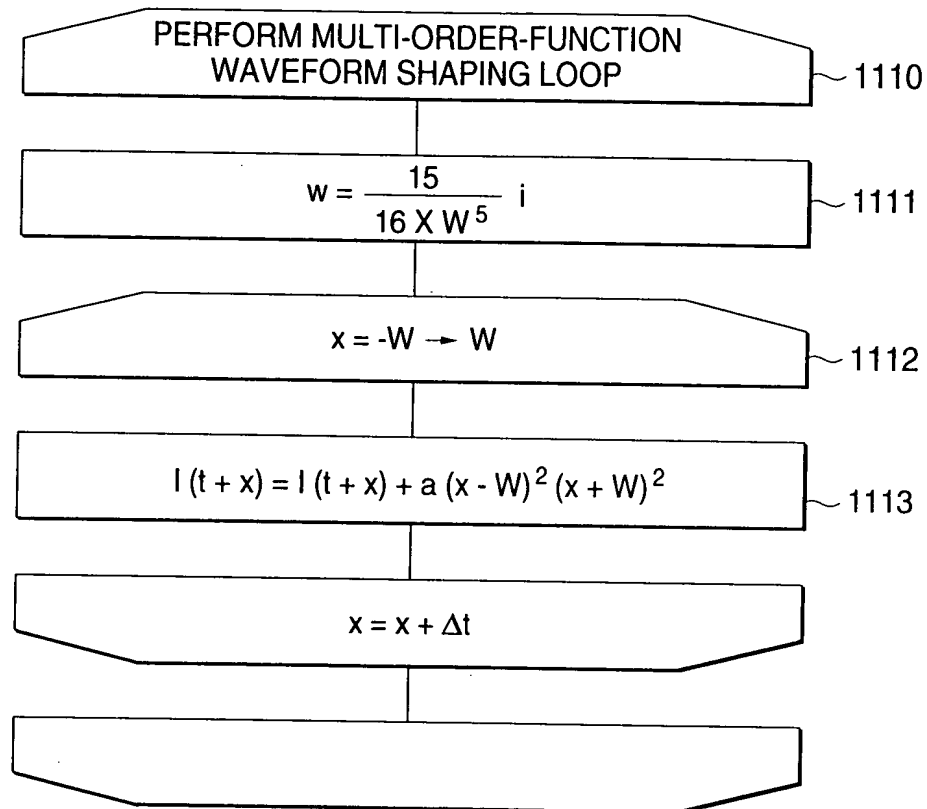




FIG. 48

FLOWCHART OF MULTI-ORDER-FUNCTION WAVEFORM SHAPING OPERATION





37/94

FIG. 49

CALCULATION RESULT OF CURRENT WAVEFORM (ELEVENTH EMBODIMENT)

AT $W = 2.5$

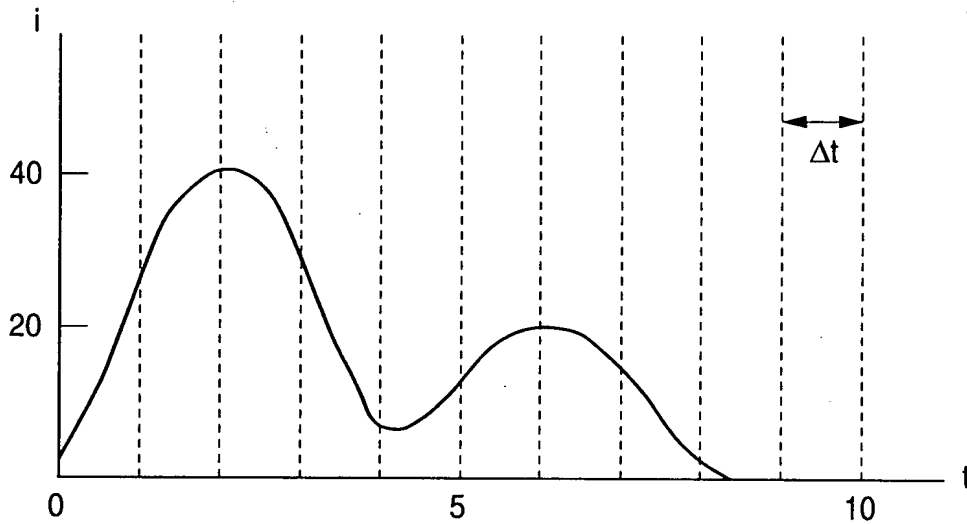
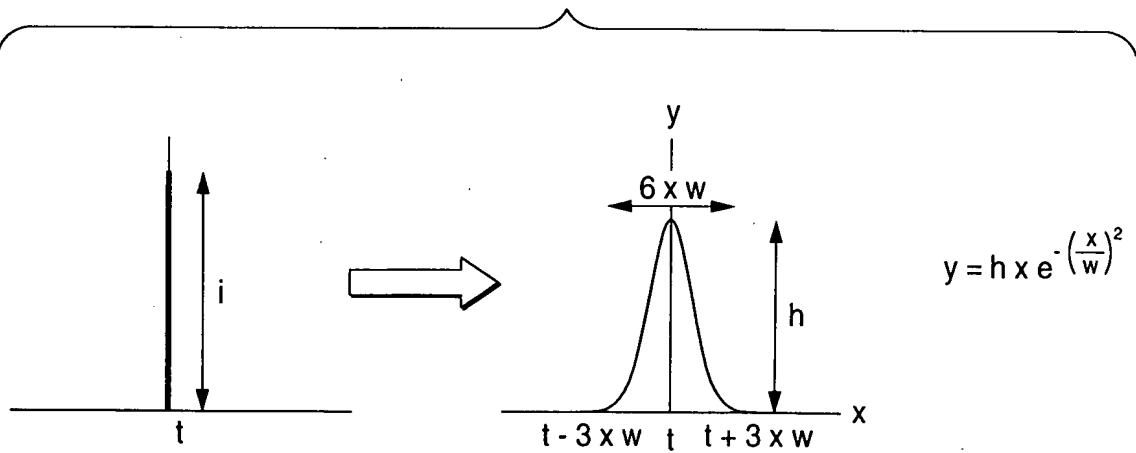


FIG. 50

GAUSSIAN FUNCTION MODEL (TWELFTH AND TWENTY-FIFTH EMBODIMENTS)



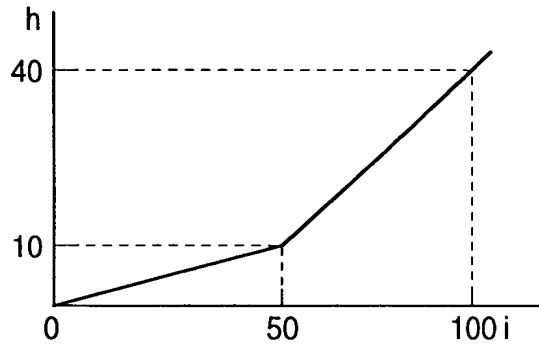


38/94

FIG. 51

i-h TABLE

i	h
0	0
50	10
100	40



IN THE CASE OF $i = 50, 100$
 $(i_1, h_1) = (50, 5)$
 $(i_2, h_2) = (100, 20)$

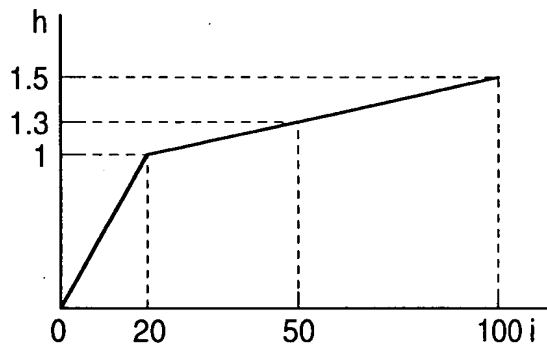
$$h(i) = \frac{h_2 - h_1}{i_2 - i_1} (i - i_1) + h_1$$

$$h(50) = 10$$
$$h(100) = 40$$

FIG. 52

i-w TABLE

i	w
0	0
20	1
100	1.5



IN THE CASE OF $i = 50, 100$
 $(i_1, w_1) = (20, 1)$
 $(i_2, w_2) = (100, 1.5)$

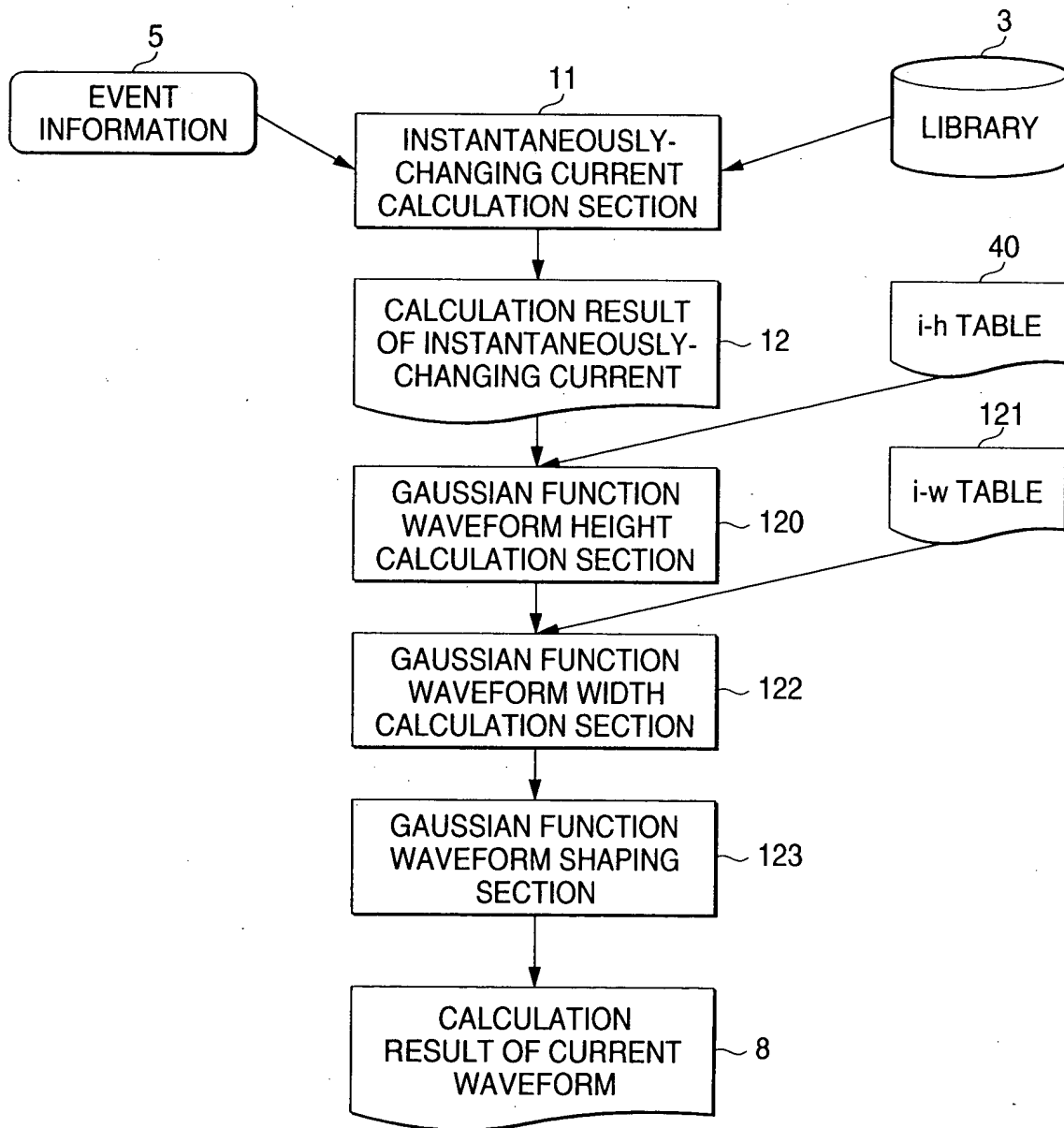
$$w(i) = \frac{w_2 - w_1}{i_2 - i_1} (i - i_1) + w_1$$

$$w(50) = 1.3$$
$$w(100) = 1.5$$



FIG. 53

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (TWELFTH EMBODIMENT)

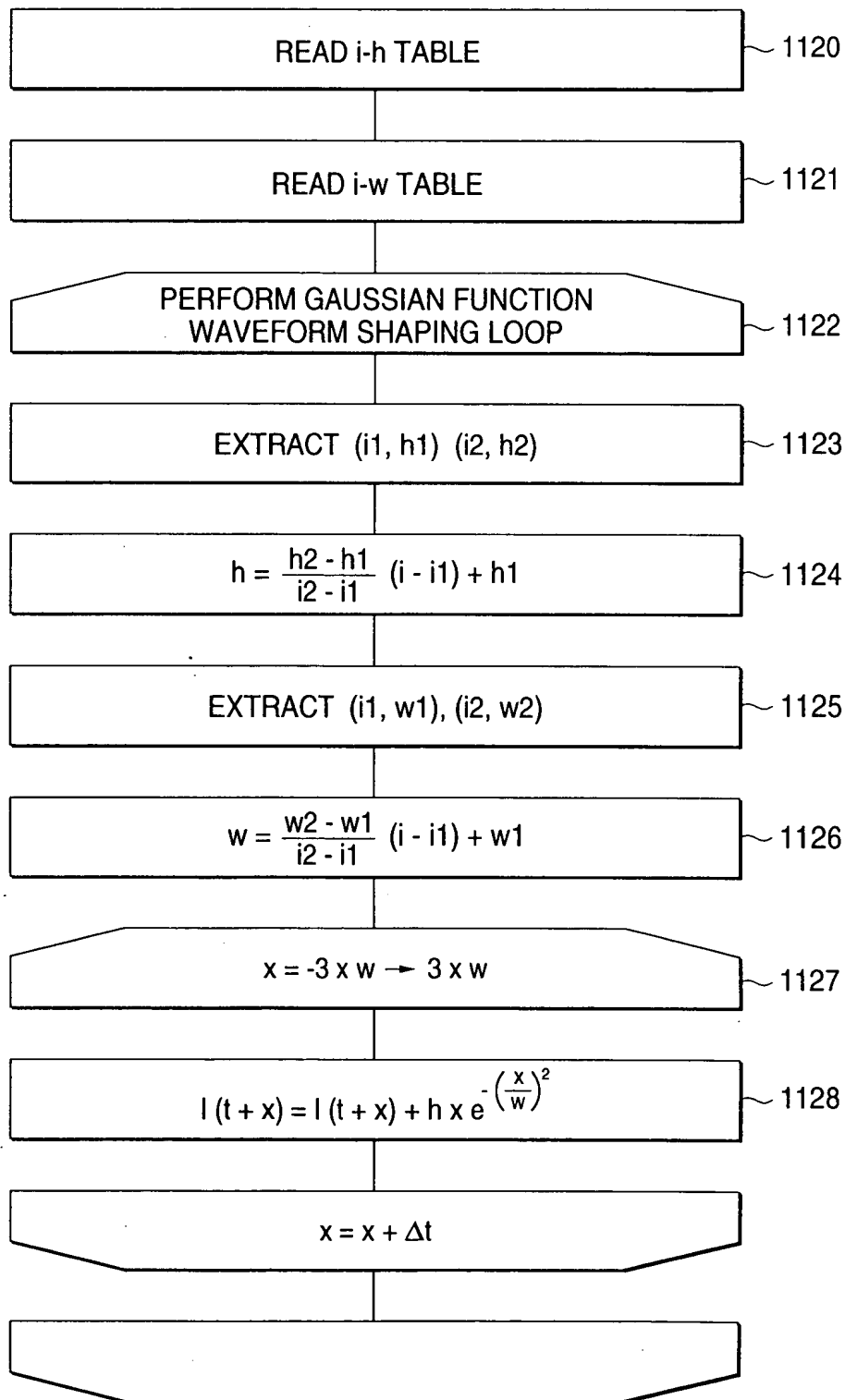




40/94

FIG. 54

FLOWCHART OF GAUSSIAN FUNCTION WAVEFORM SHAPING

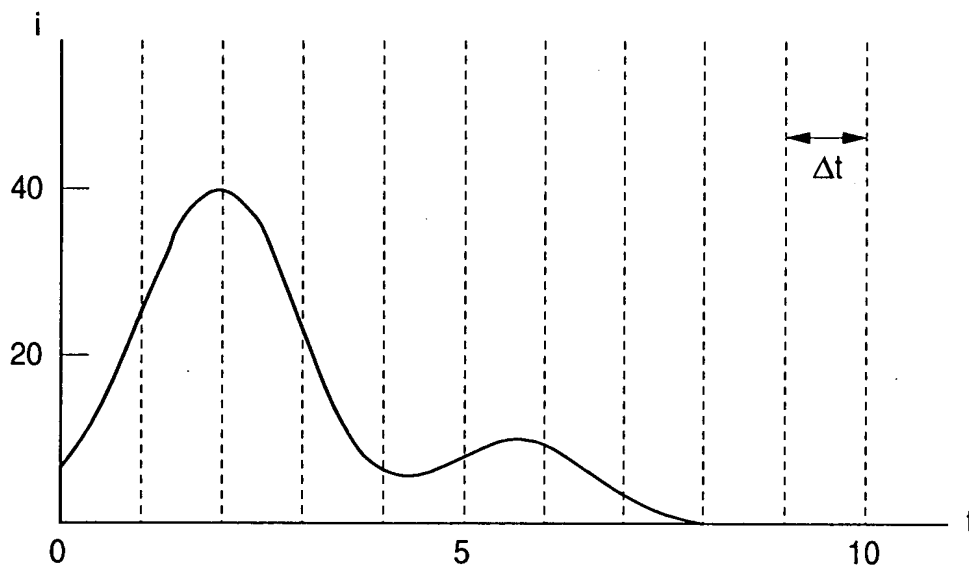




41/94

FIG. 55

CALCULATION RESULT OF CURRENT WAVEFORM (TWELFTH EMBODIMENT)





42/94

FIG. 56

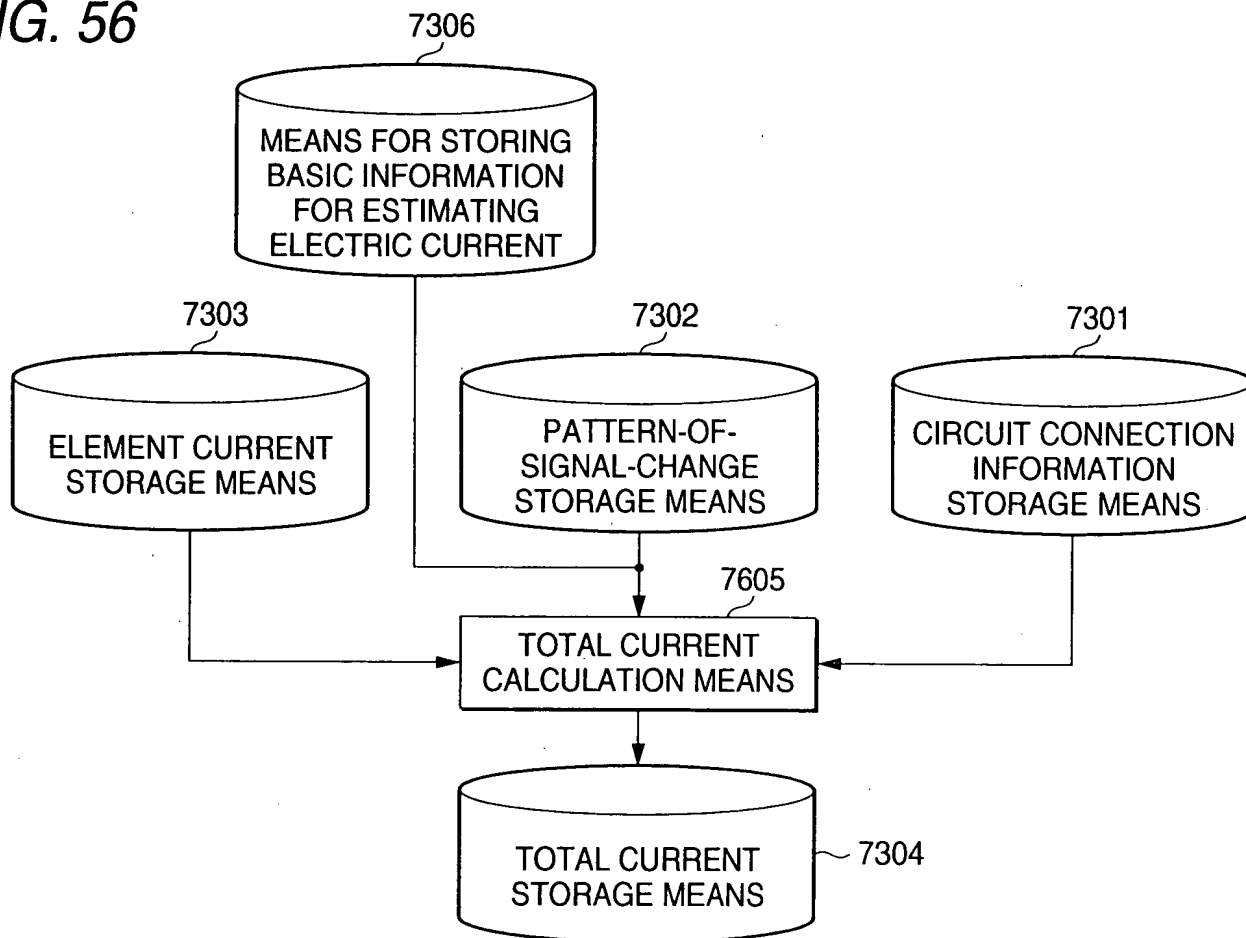
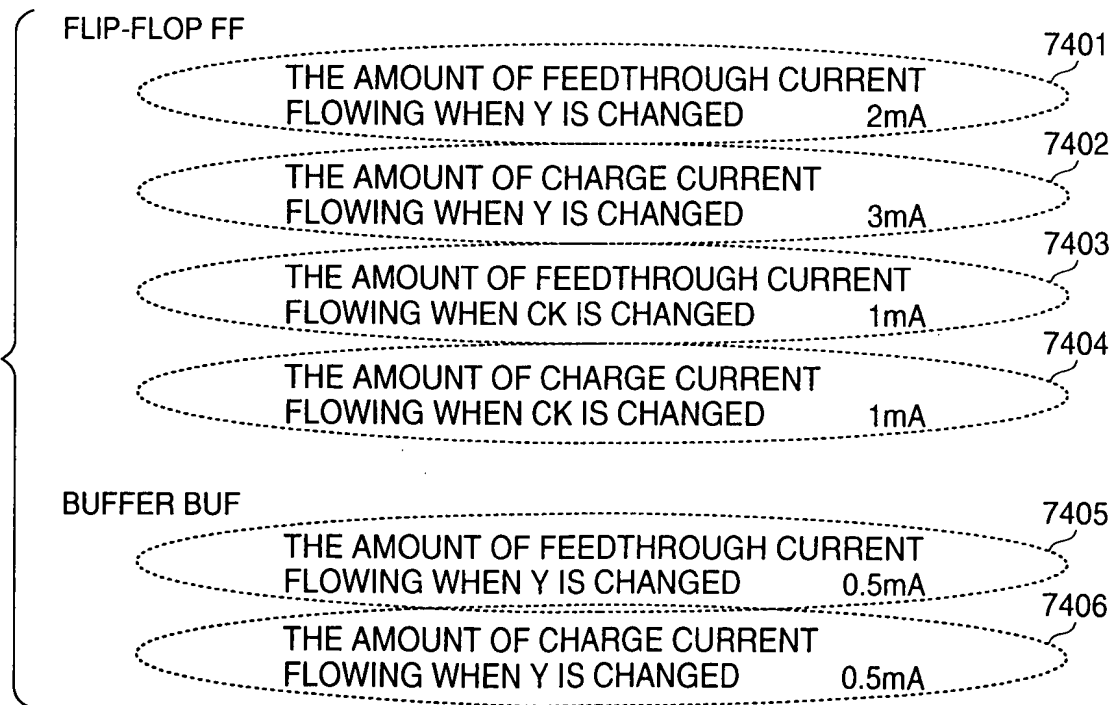
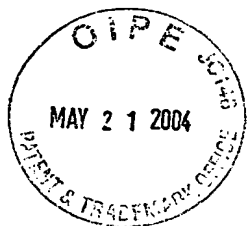


FIG. 57





43/94

FIG. 58

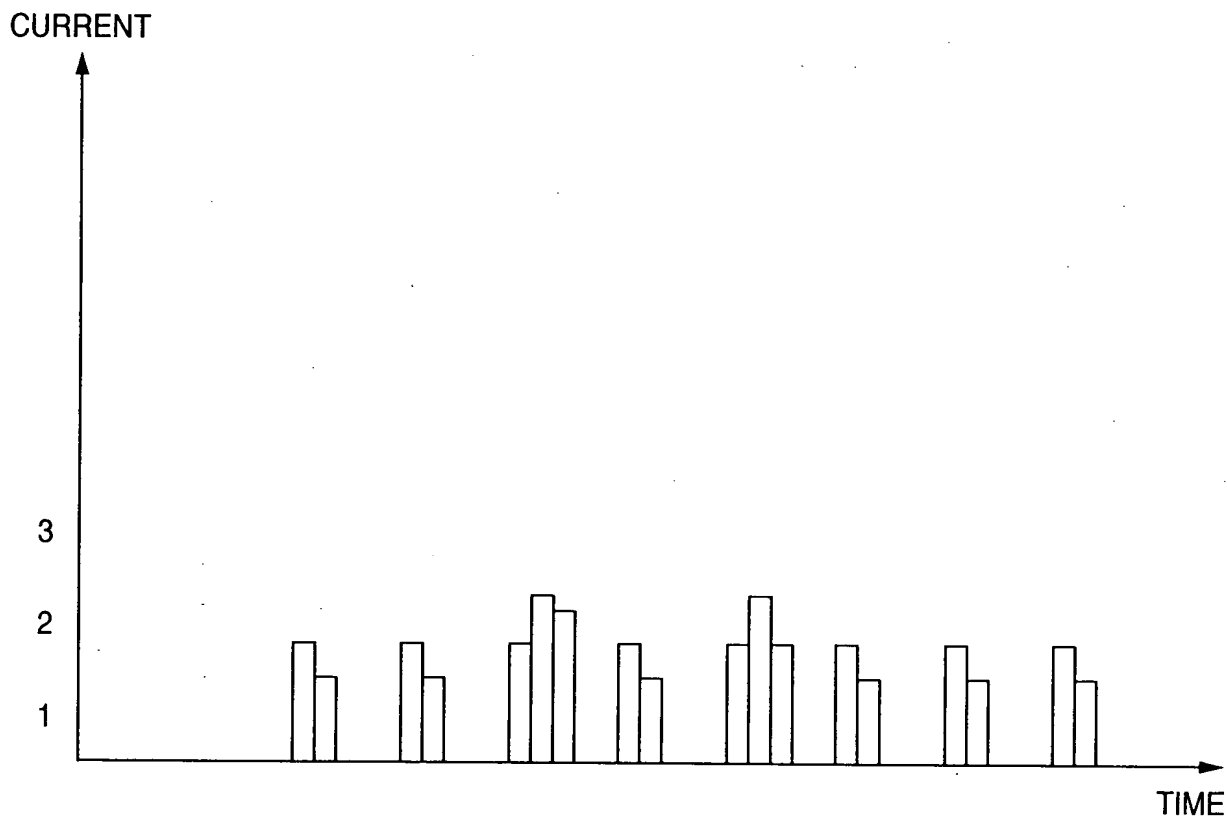
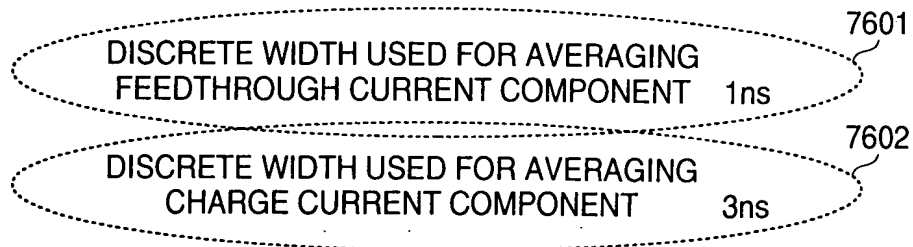
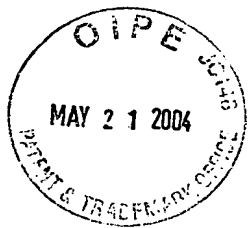


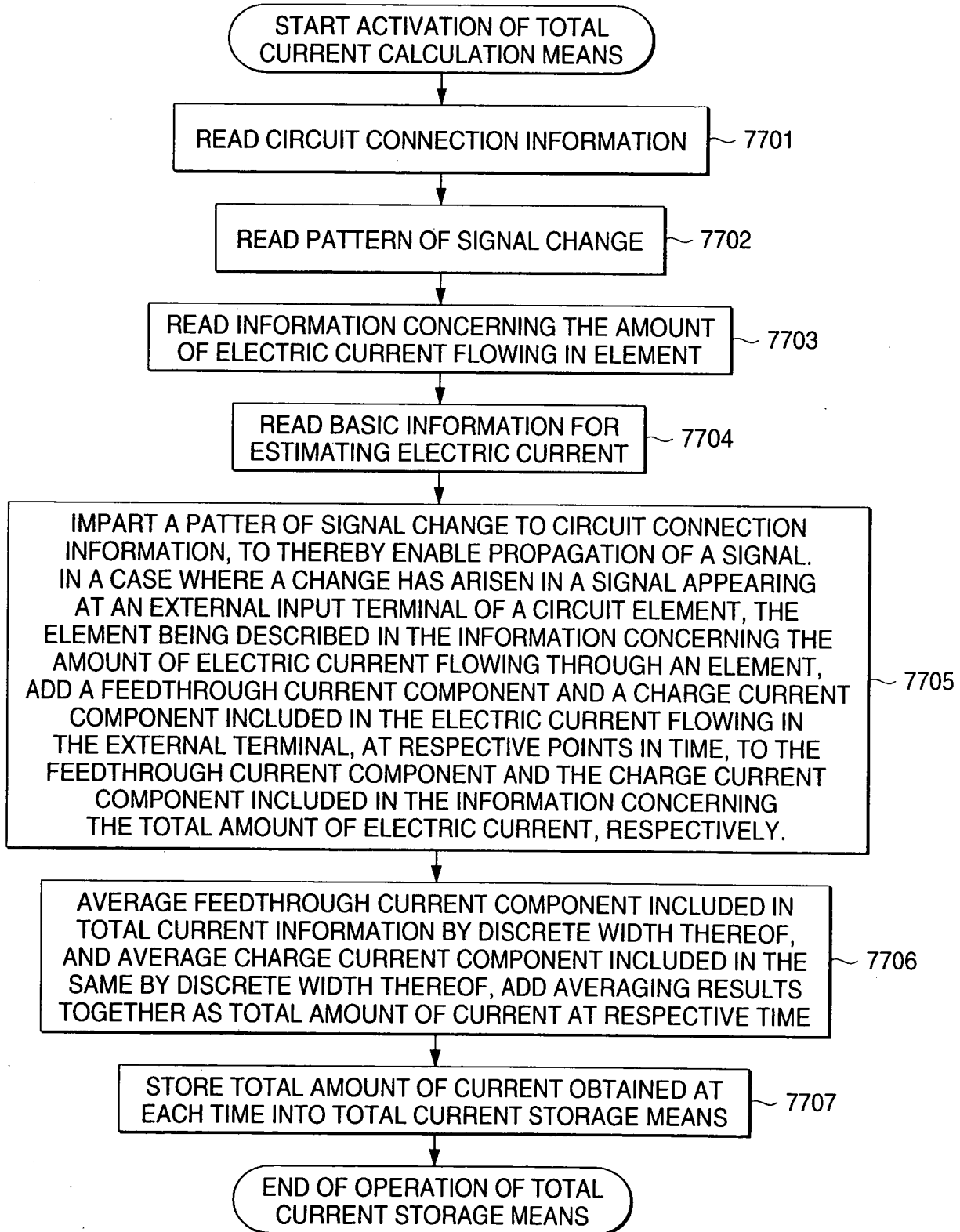
FIG. 59





44/94

FIG. 60

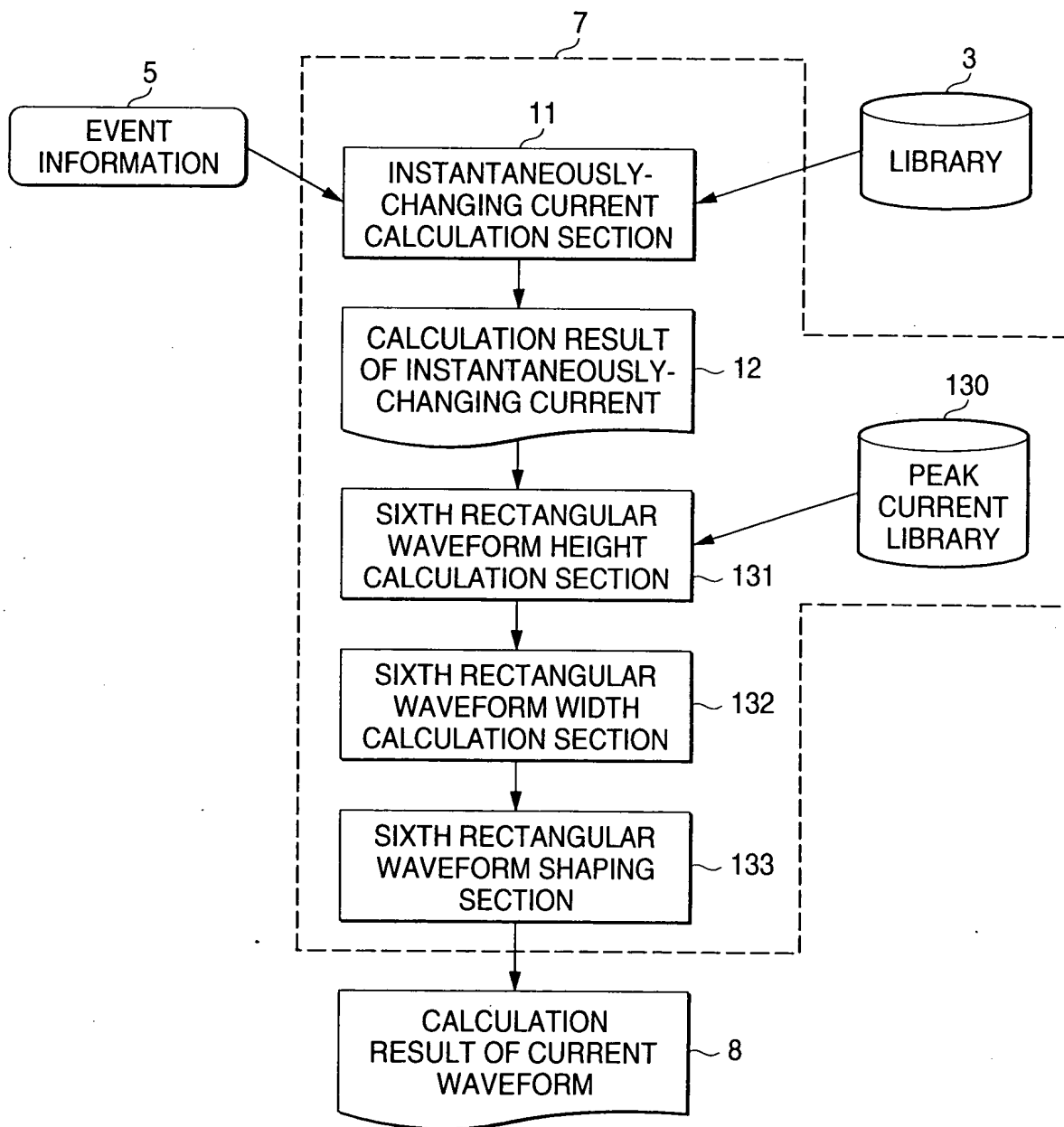




45/94

FIG. 61

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (FOURTEENTH EMBODIMENT)





46/94

FIG. 62

FLOWCHART OF SIXTH RECTANGULAR WAVEFORM SHAPING OPERATION

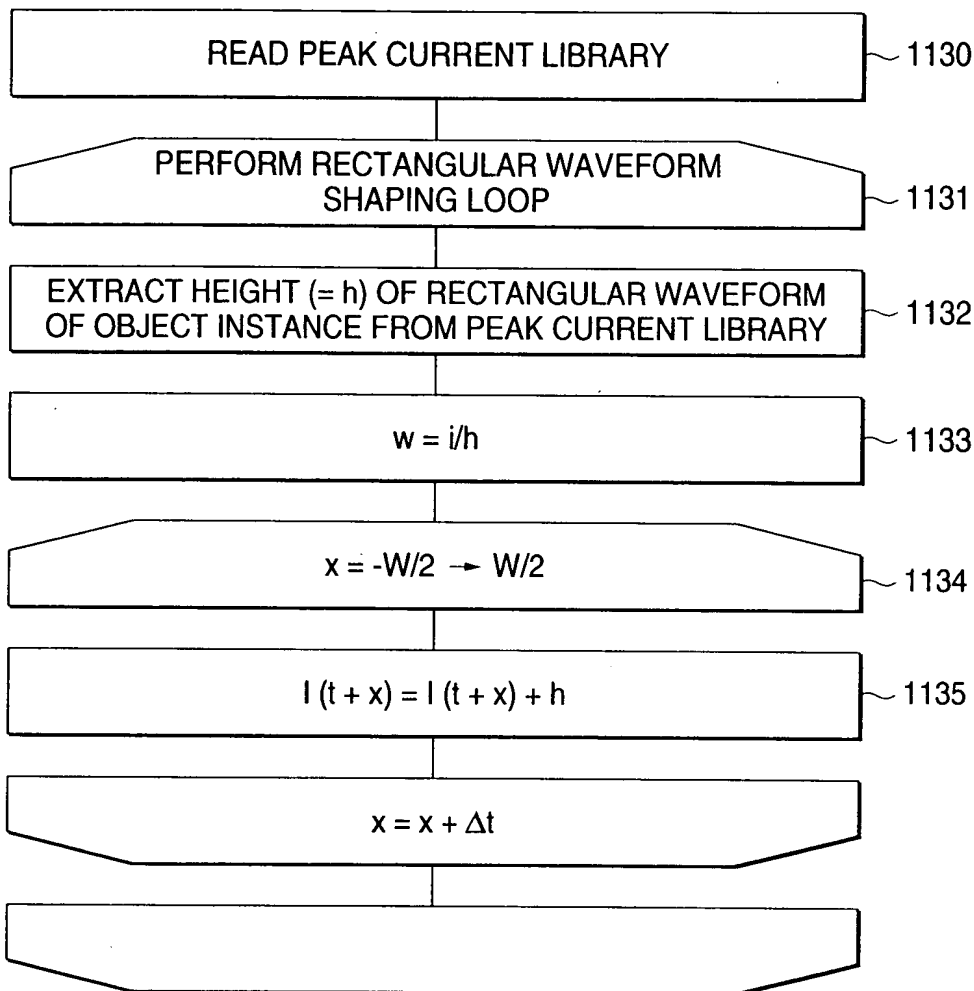
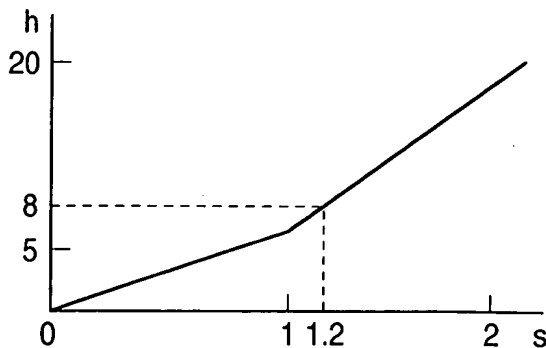


FIG. 63

s-h TABLE

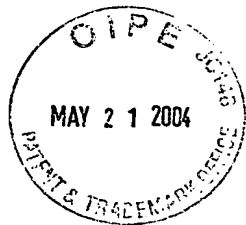
s	h
0	0
1	5
2	20



IN THE CASE OF $s = 1.2$
 $(s_1, h_1) = (1, 5)$
 $(s_2, h_2) = (2, 20)$

$$h(s) = \frac{h_2 - h_1}{s_2 - s_1} (s - s_1) + h_1$$

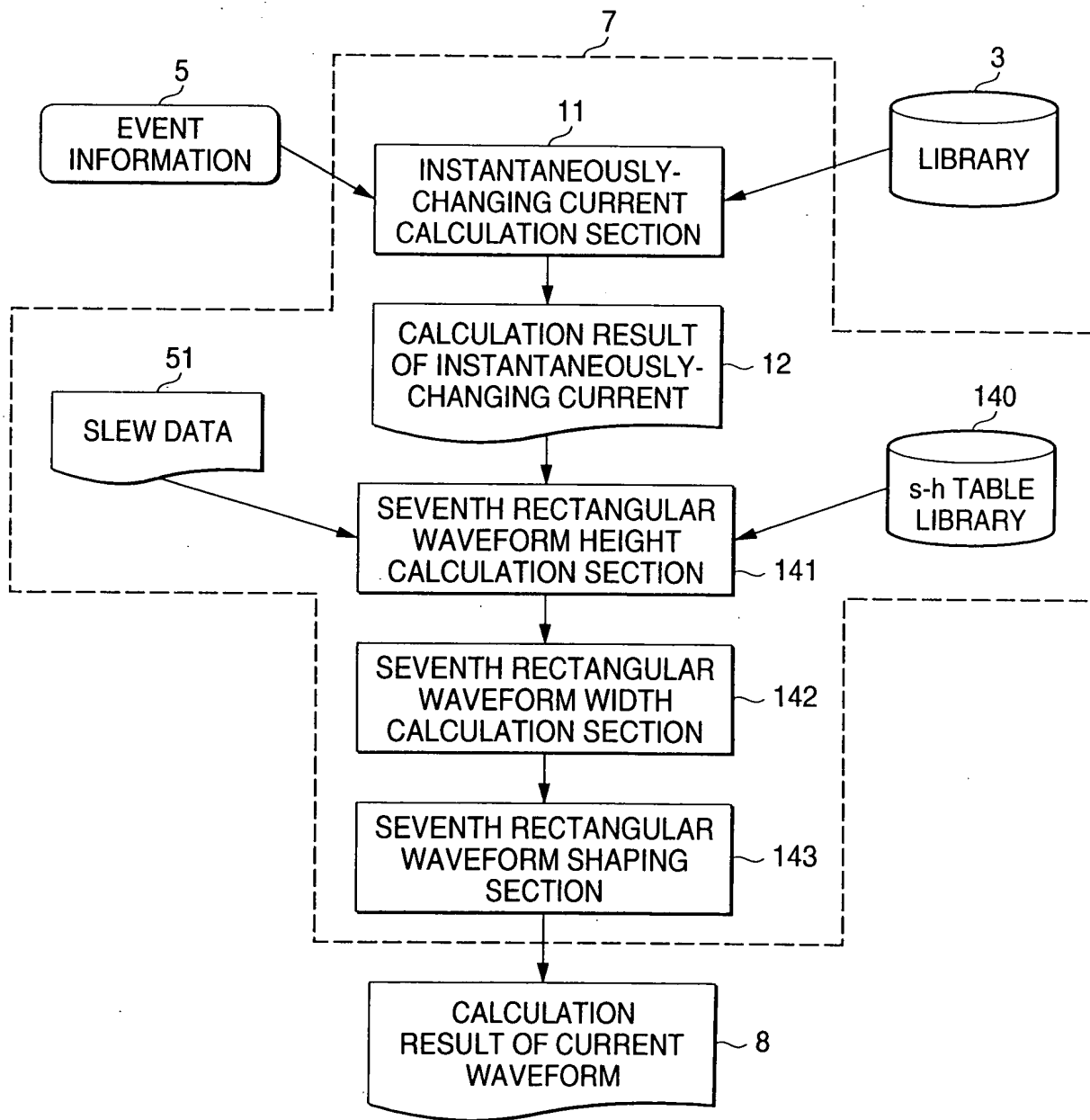
$$h(1, 2) = 8$$

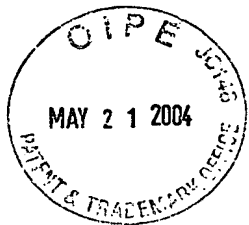


47/94

FIG. 64

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (FIFTEENTH EMBODIMENT)

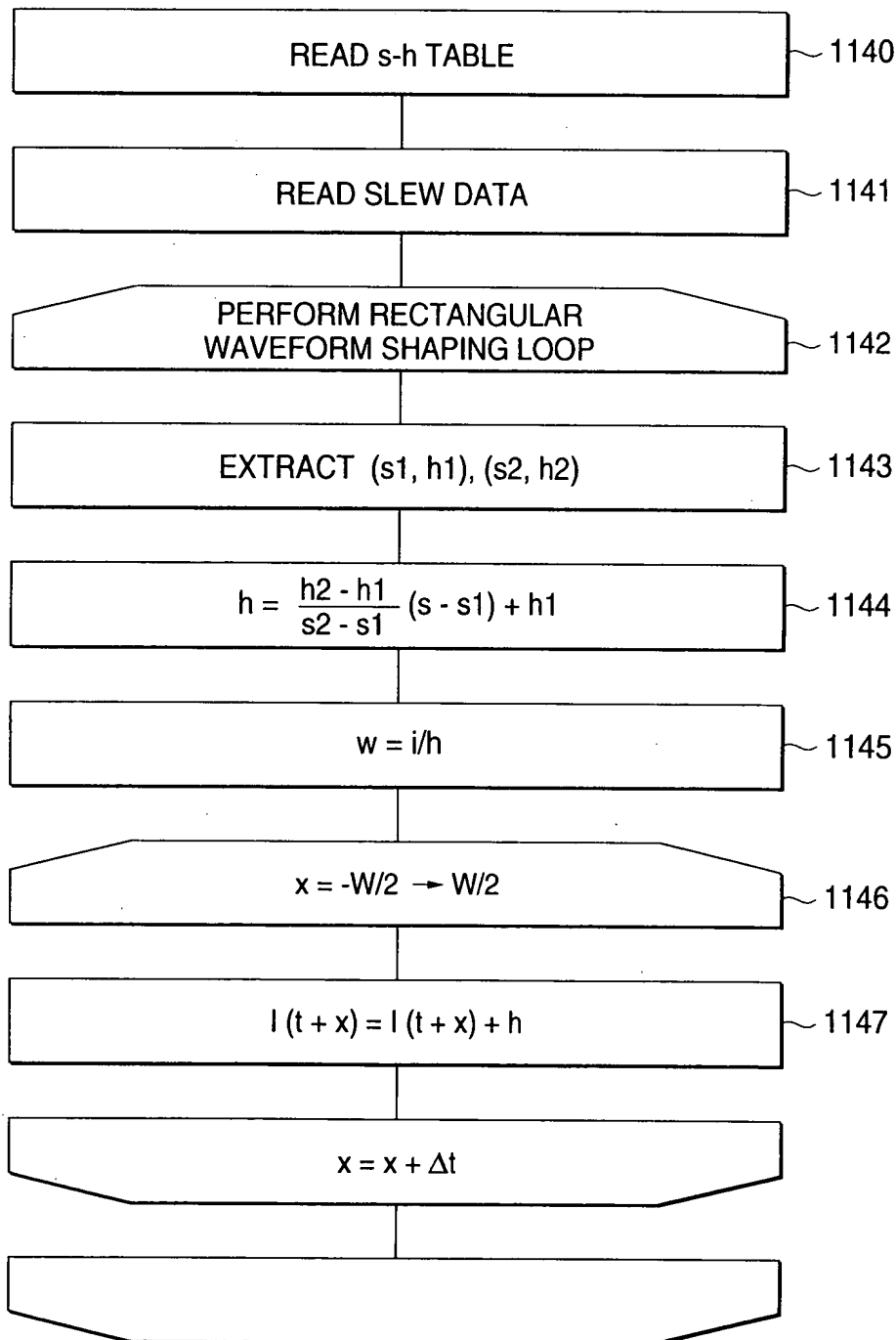




48/94

FIG. 65

FLOWCHART OF SEVENTH RECTANGULAR WAVEFORM SHAPING OPERATION



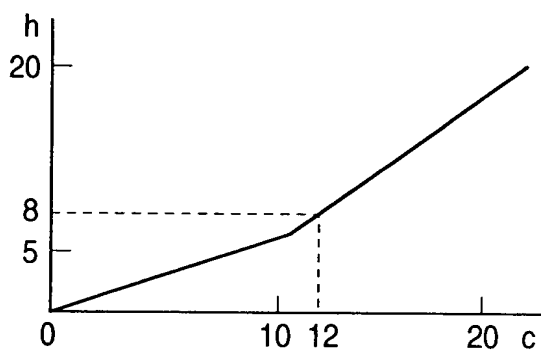


49/94

FIG. 66

c-h TABLE

c	h
0	0
10	5
20	20



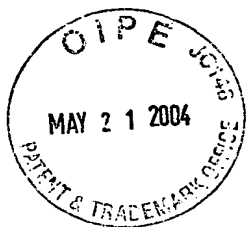
IN THE CASE OF $c = 12$

$(c_1, h_1) = (10, 5)$

$(c_2, h_2) = (20, 20)$

$$h(c) = \frac{h_2 - h_1}{c_2 - c_1} (c - c_1) + h_1$$

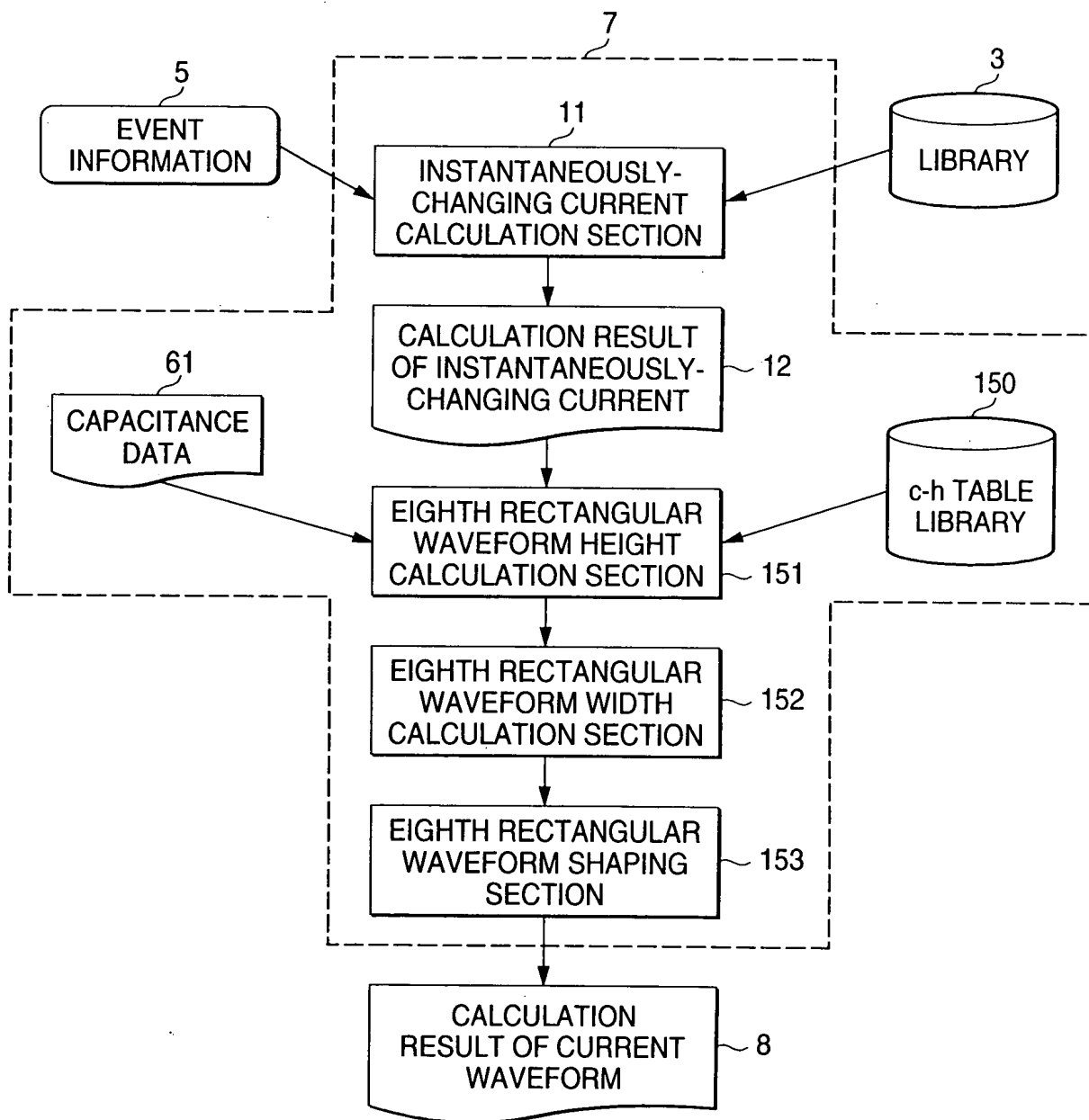
$$h(12) = 8$$



50/94

FIG. 67

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (SIXTEENTH EMBODIMENT)

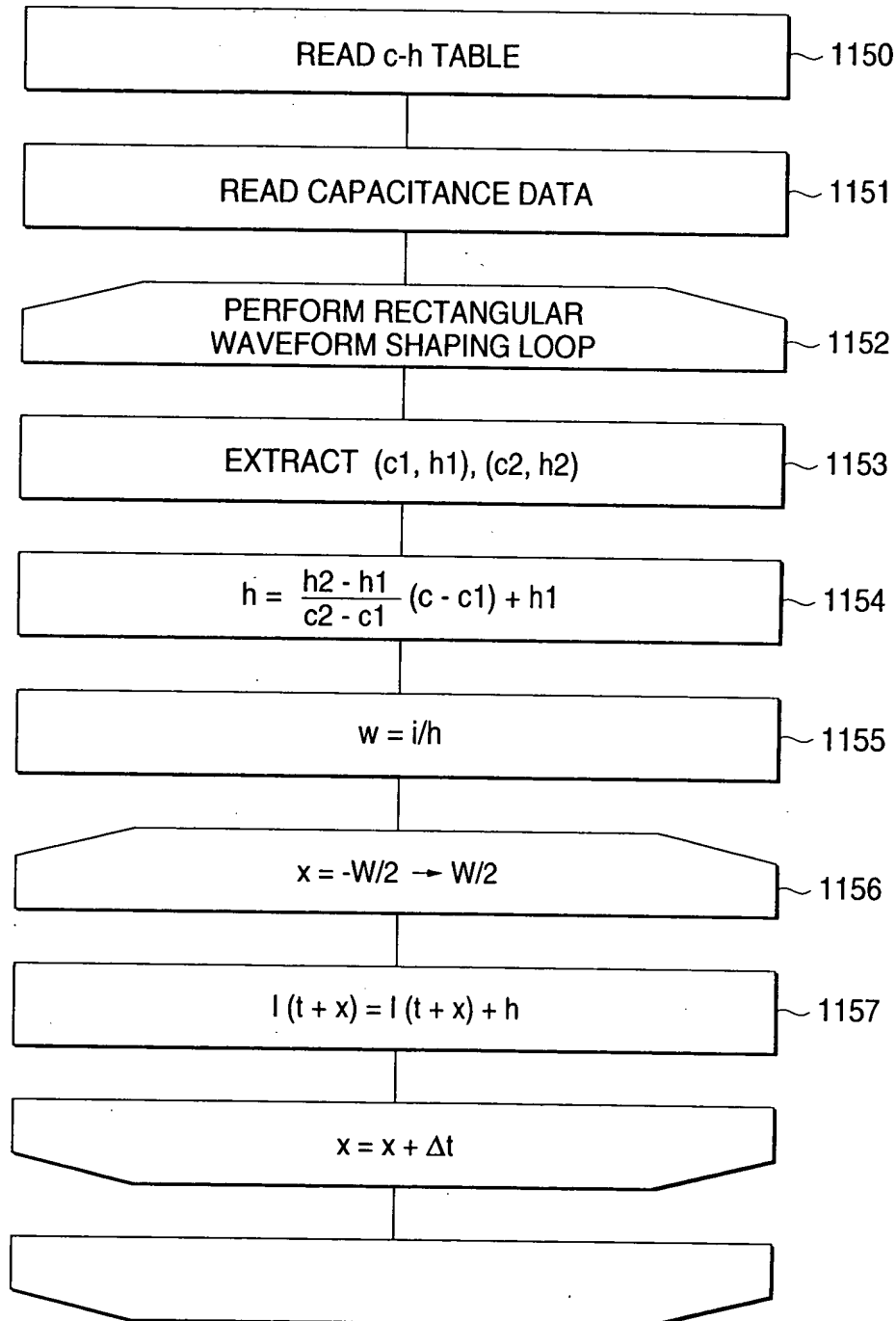




51/94

FIG. 68

FLOWCHART OF EIGHTH RECTANGULAR WAVEFORM SHAPING





52/94

FIG. 69

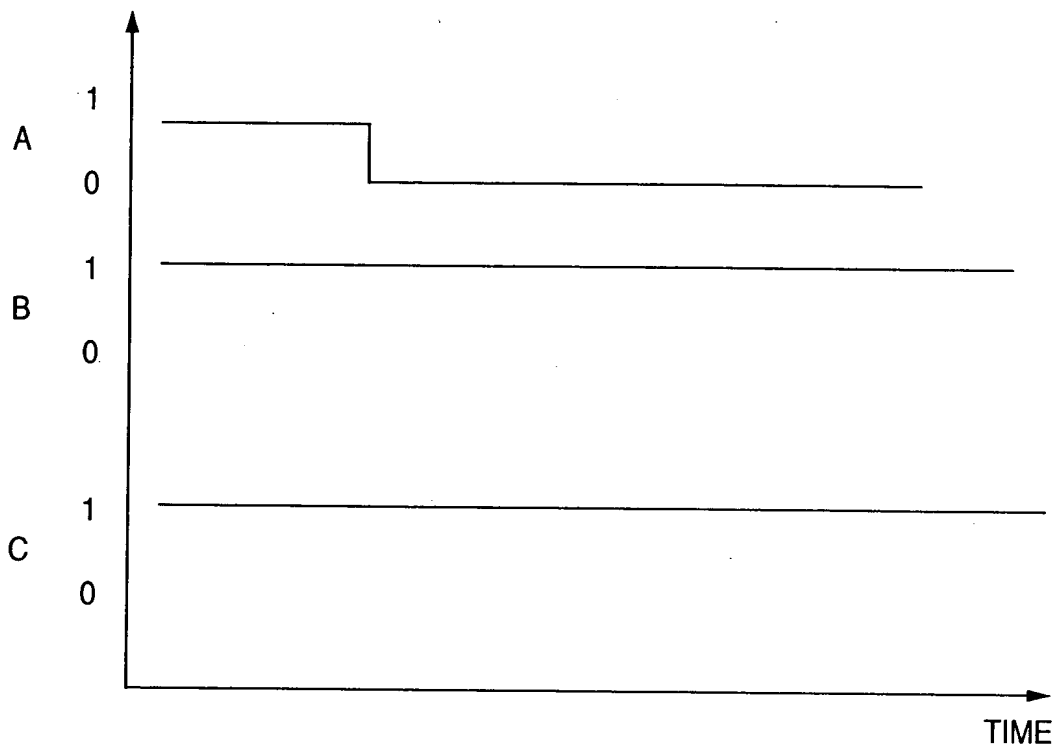
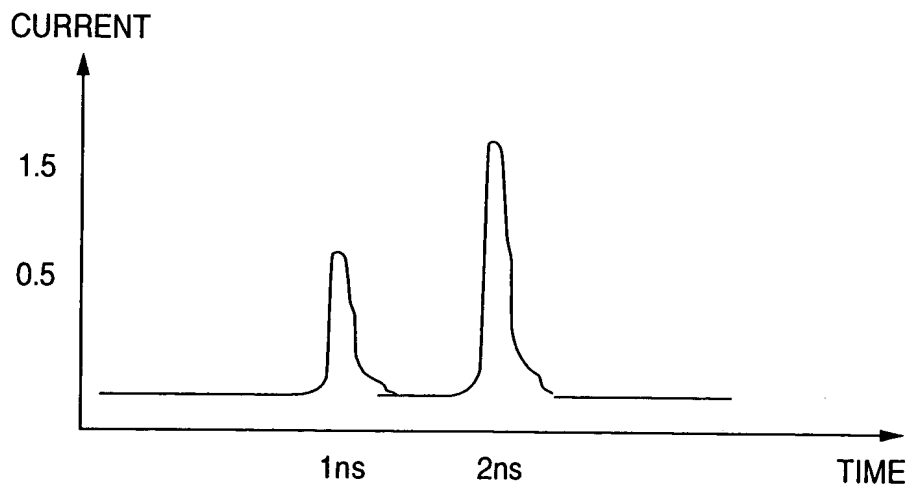
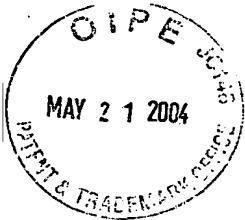


FIG. 70





53/94

FIG. 71

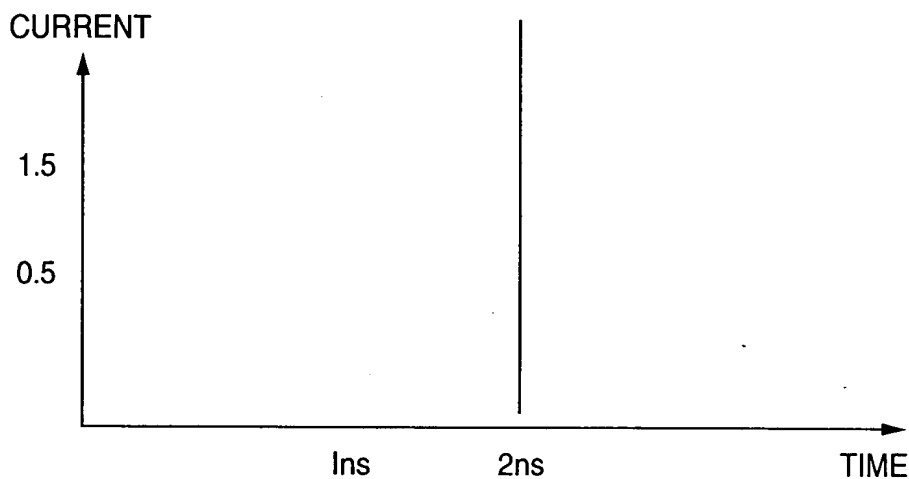
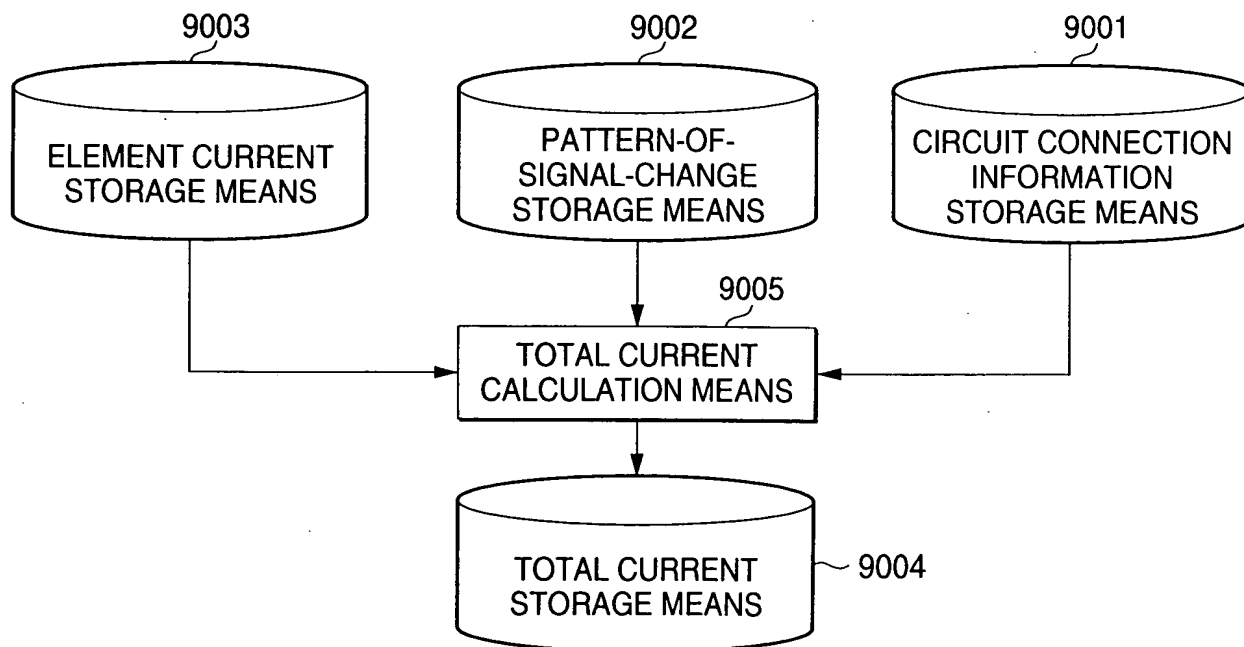


FIG. 72





54/94

FIG. 73

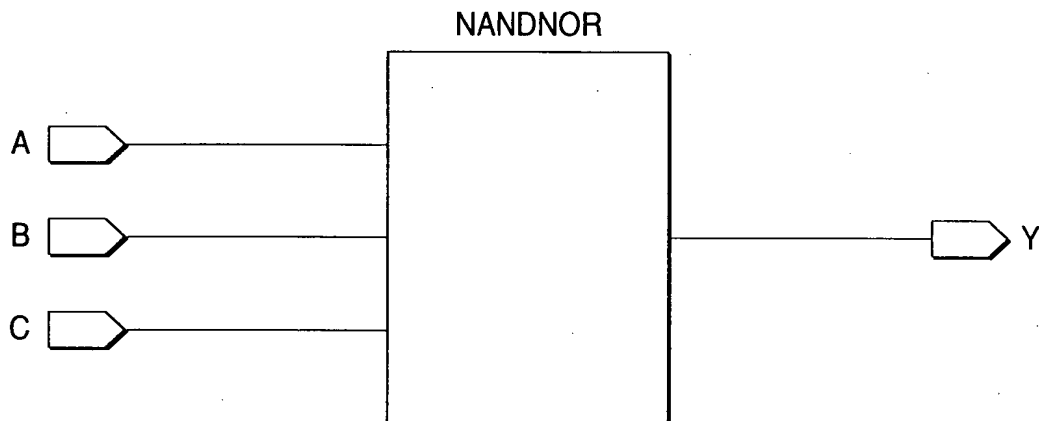
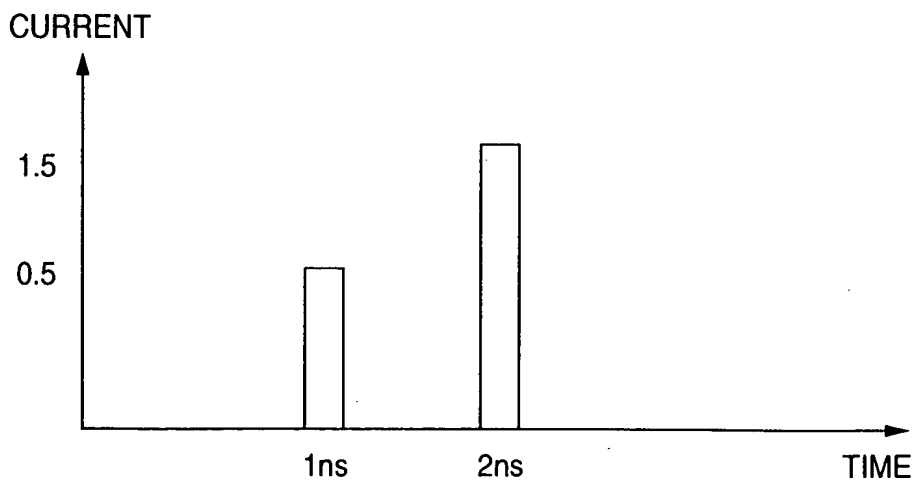
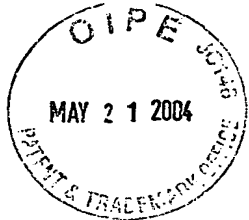


FIG. 74





55/94

FIG. 75

NANDNOR

9301	9302	9303	9304	
CHANGED PINS	TIME	TOTAL CURRENT	PEAK CURRENT	
A	1ns	1mA	0.5mA	9305
A	2ns	3mA	1.5mA	
B	1ns	1mA	0.5mA	9306
B	2ns	3mA	1.5mA	
C	1ns	3mA	1.5mA	9307



56/94

FIG. 76

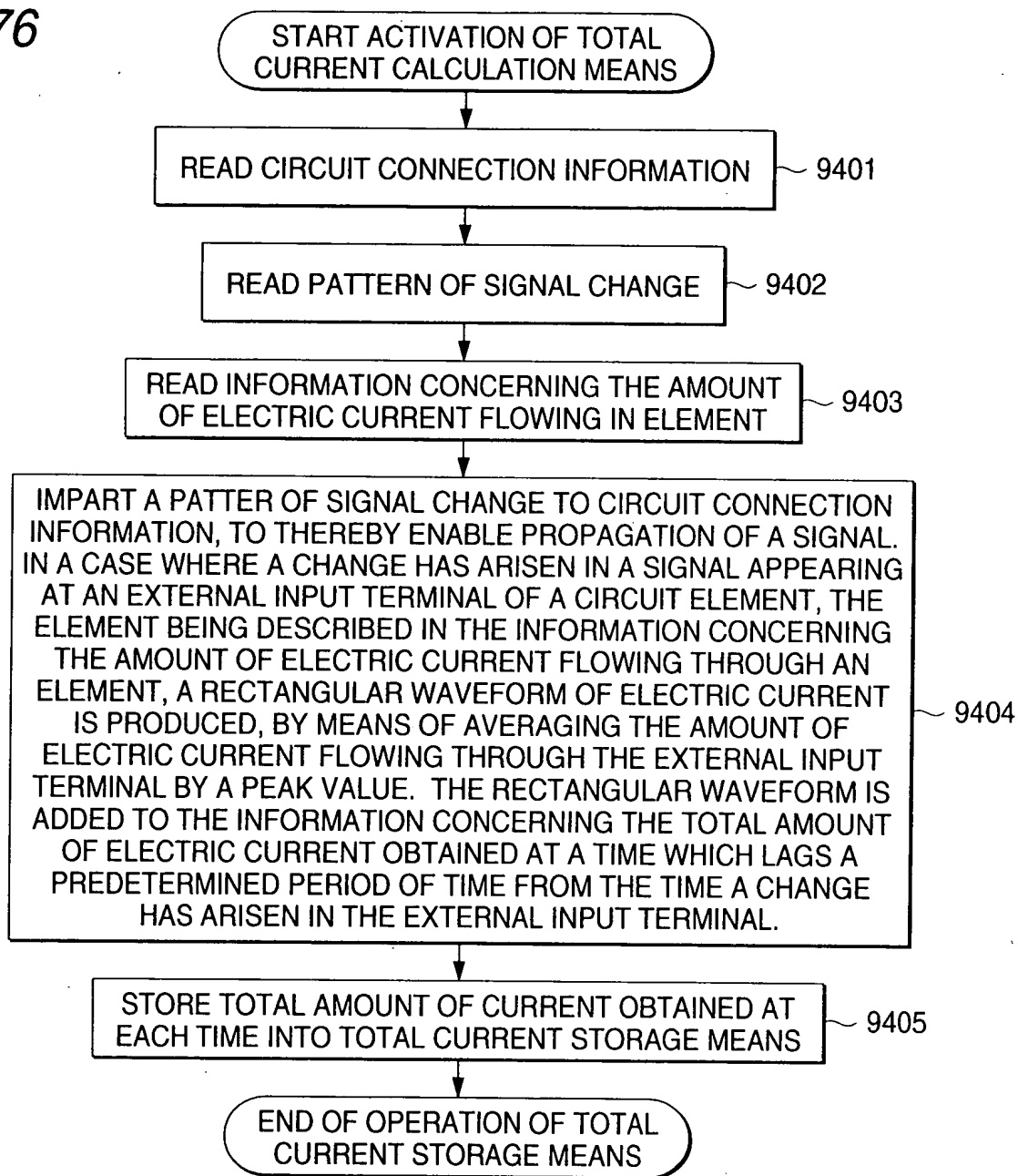
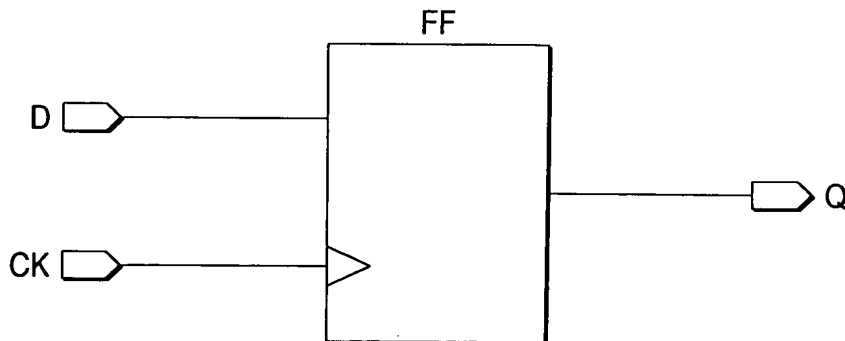
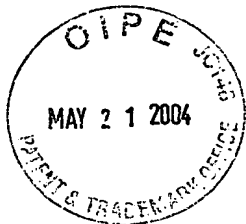


FIG. 77





57/94

FIG. 78

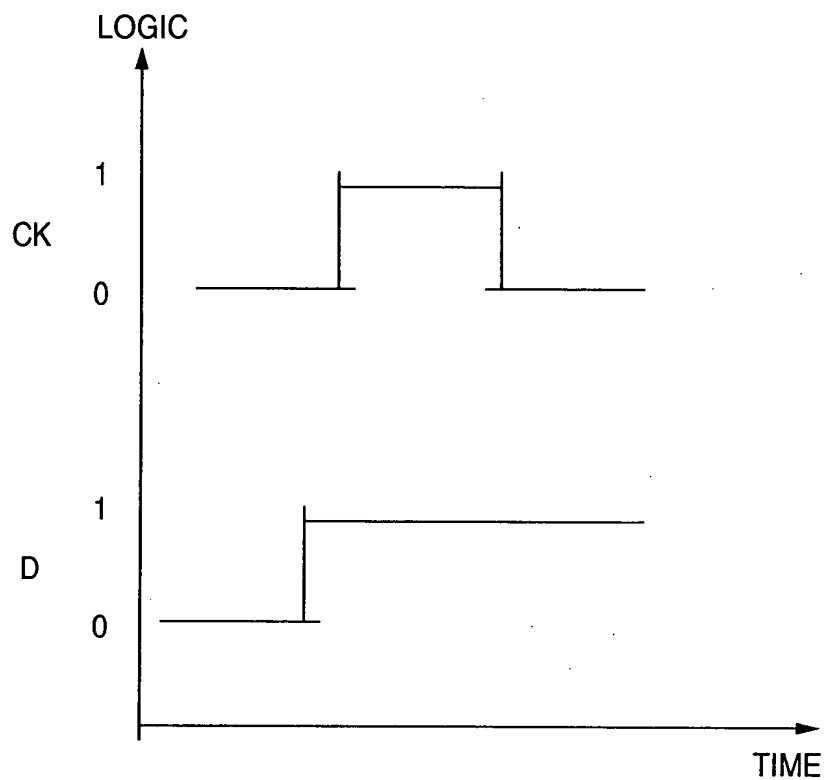
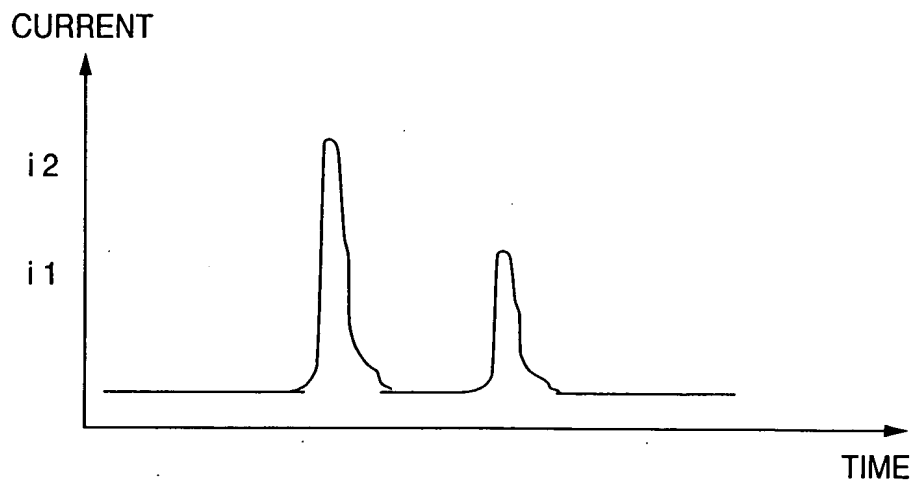


FIG. 79





58/94

FIG. 80

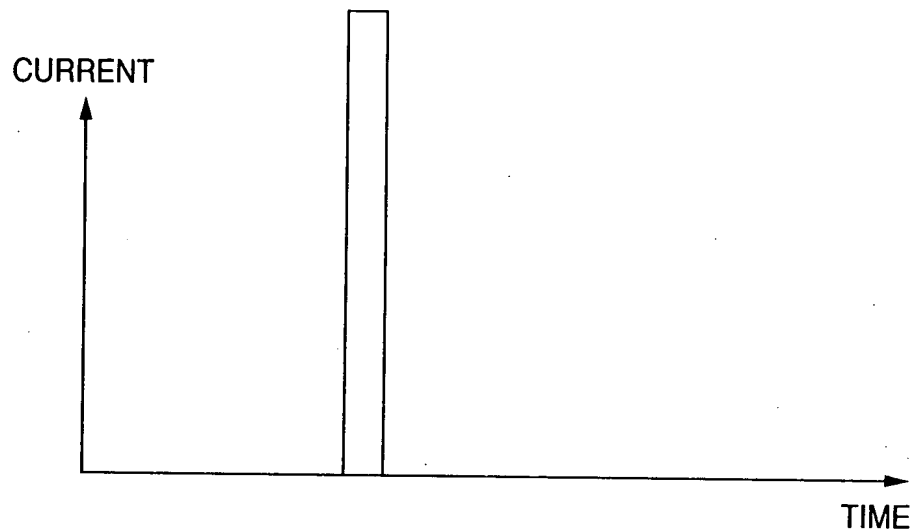


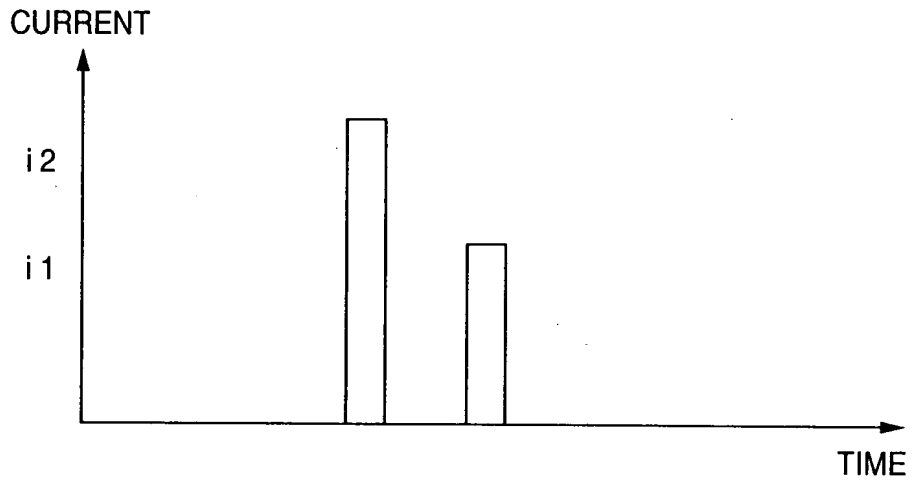
FIG. 81

FF	EDGE	CURRENT	PEAK VALUE
	RISE	15mA	7.5mA
	FALL	5mA	2.5mA
		9901	9902



59/94

FIG. 82





60/94

FIG. 83

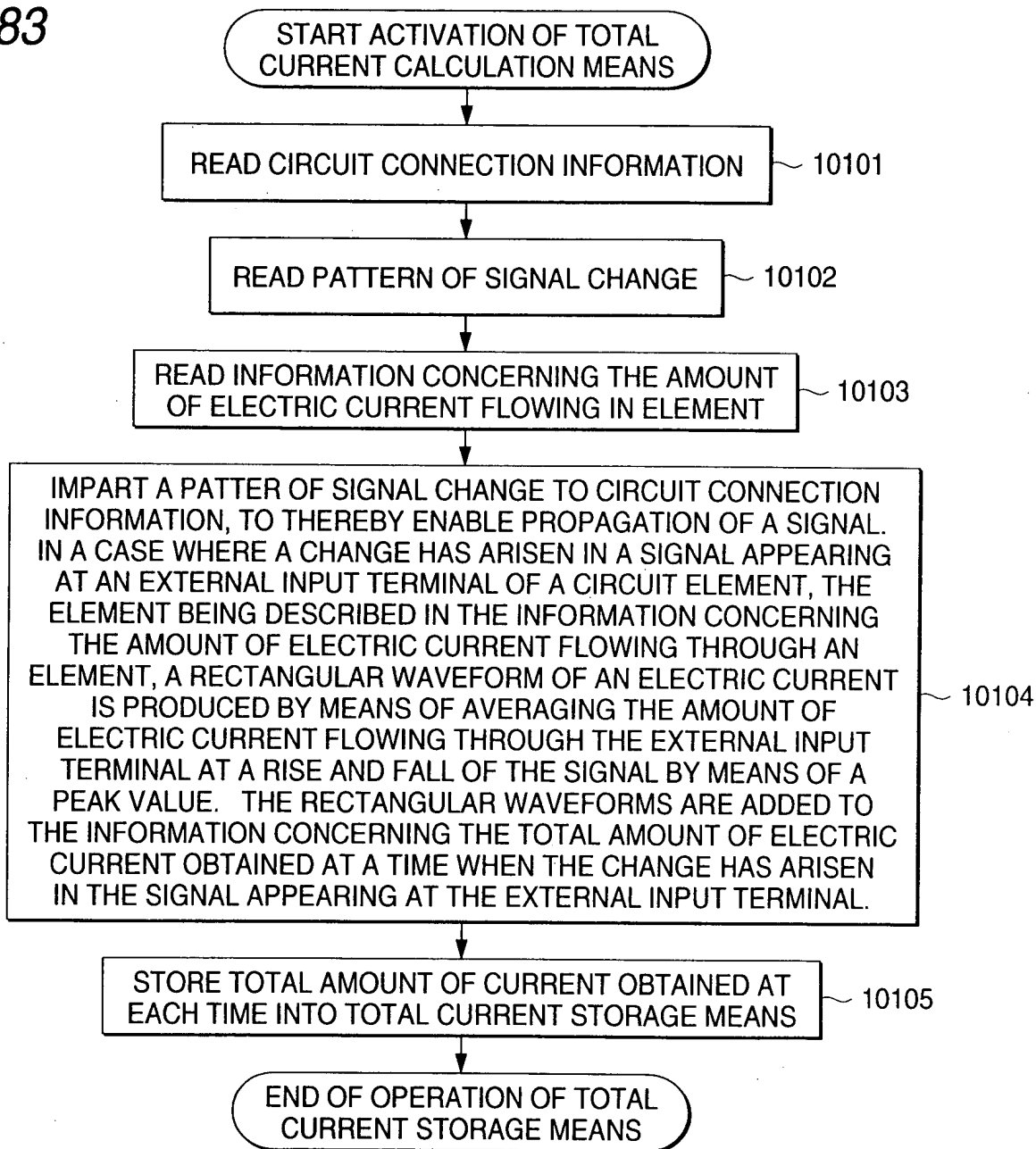
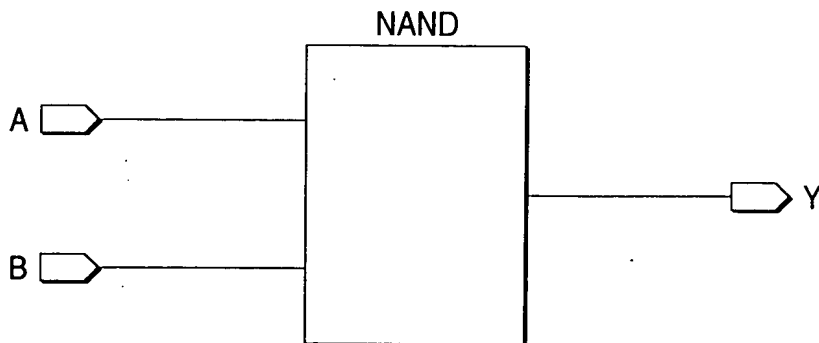


FIG. 84





61/94

FIG. 85

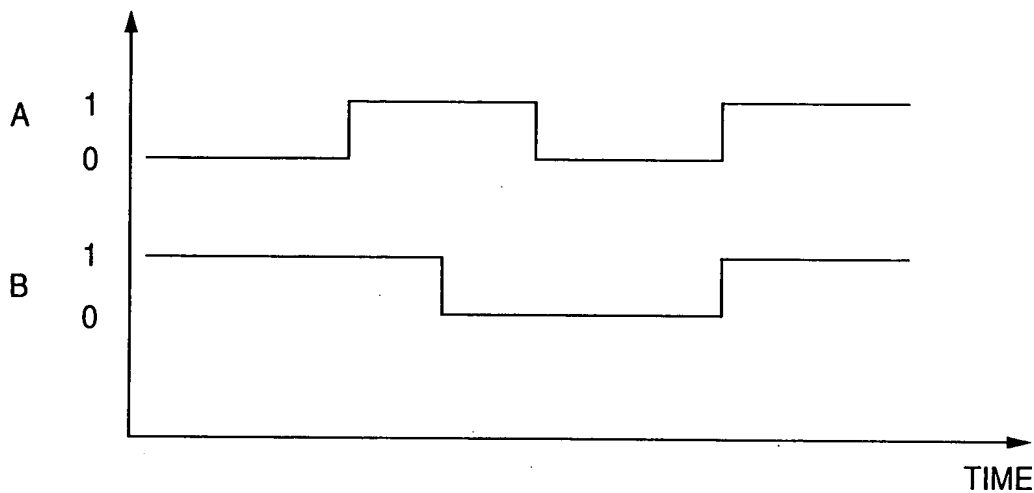
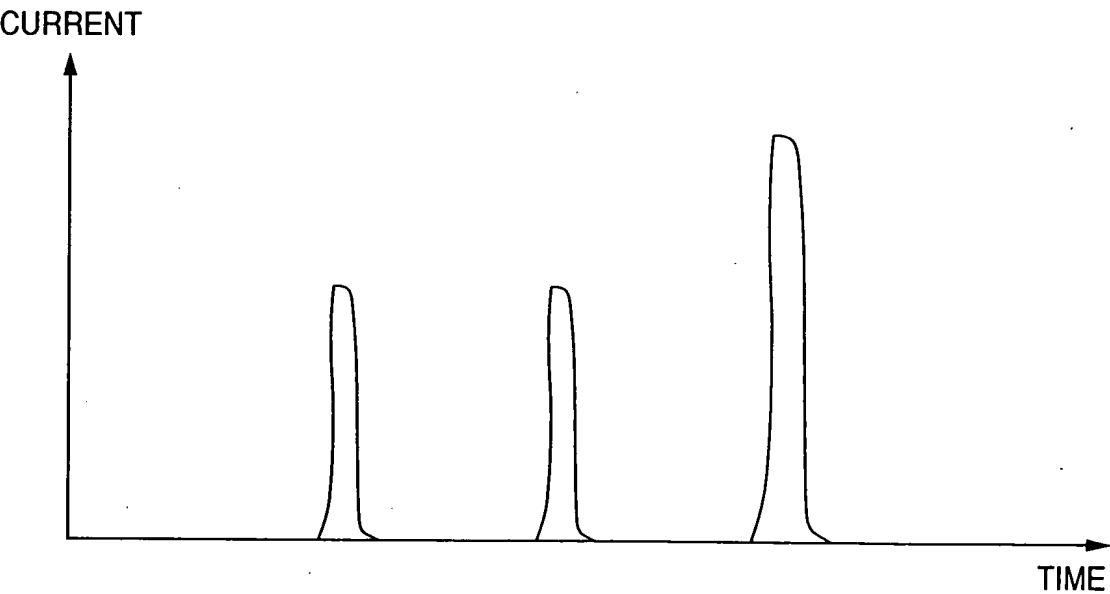


FIG. 86





62/94

FIG. 87

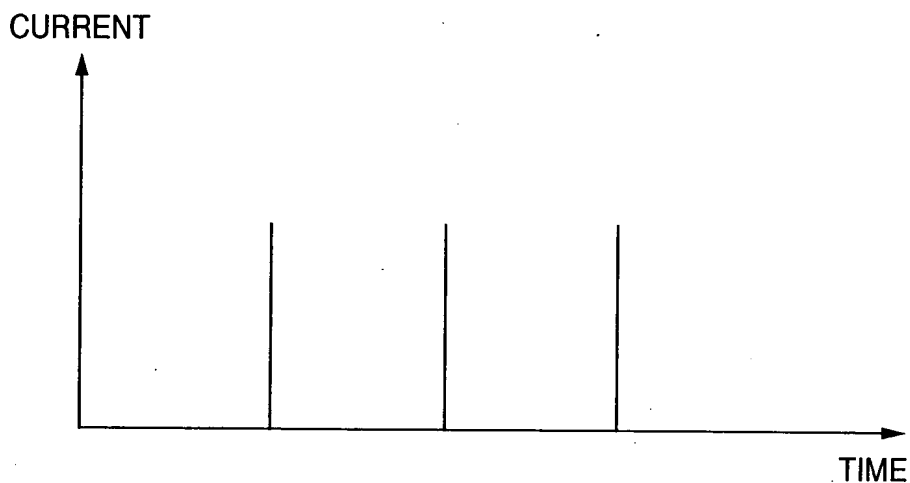


FIG. 88

NAND, Y-TERMINAL

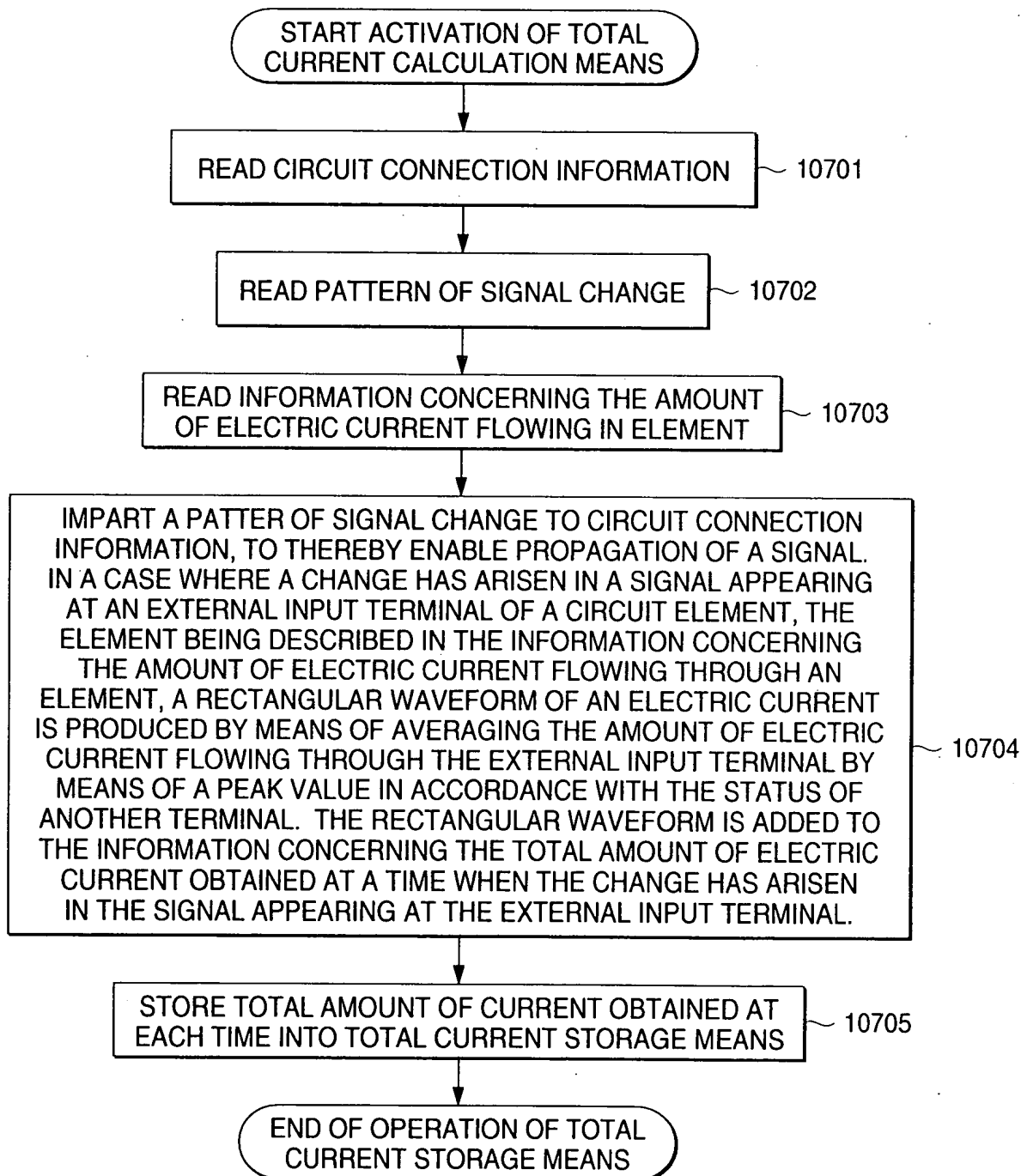
10601

A = 1, B = 0	→	TOTAL CURRENT AT LOGIC VALUE OF 1	3mA
A = 1, B = 0	→	PEAK CURRENT AT LOGIC VALUE OF 1	1mA
A = 1, B = 1	→	TOTAL CURRENT AT LOGIC VALUE OF 0	3mA
A = 1, B = 1	→	PEAK CURRENT AT LOGIC VALUE OF 0	1mA
B = 1, A = 0	→	TOTAL CURRENT AT LOGIC VALUE OF 1	3mA
B = 1, A = 0	→	PEAK CURRENT AT LOGIC VALUE OF 1	1mA
B = 1, A = 1	→	TOTAL CURRENT AT LOGIC VALUE OF 0	3mA
B = 1, A = 1	→	PEAK CURRENT AT LOGIC VALUE OF 0	1mA
A = 0 → 1, B = 0 → 1		TOTAL CURRENT AT LOGIC VALUE OF 1	4mA
A = 0 → 1, B = 0 → 1		PEAK CURRENT AT LOGIC VALUE OF 1	1.5mA
A = 1 → 0, B = 1 → 0		TOTAL CURRENT AT LOGIC VALUE OF 0	4mA
A = 1 → 0, B = 1 → 0		PEAK CURRENT AT LOGIC VALUE OF 0	1.5mA



63/94

FIG. 89

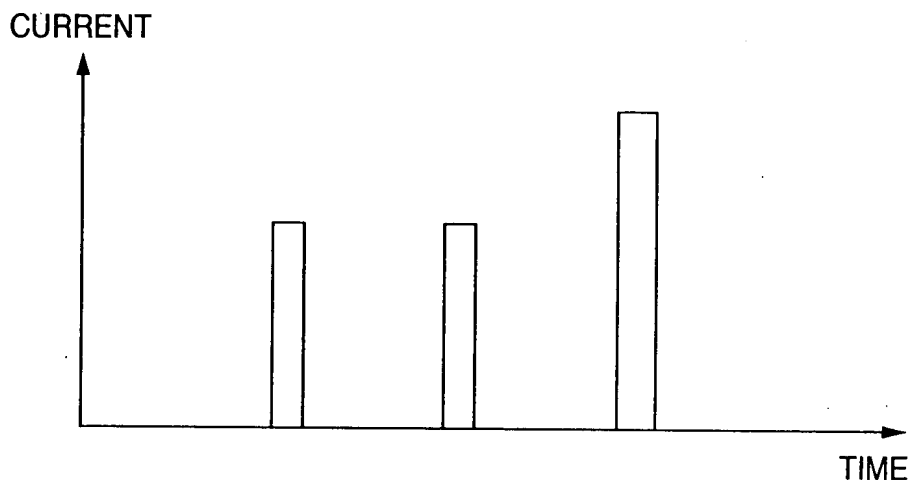




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Amdt. Dated May 18, 2004
Reply to Office action of Nov. 18, 2003
Replacement Sheet

64/94

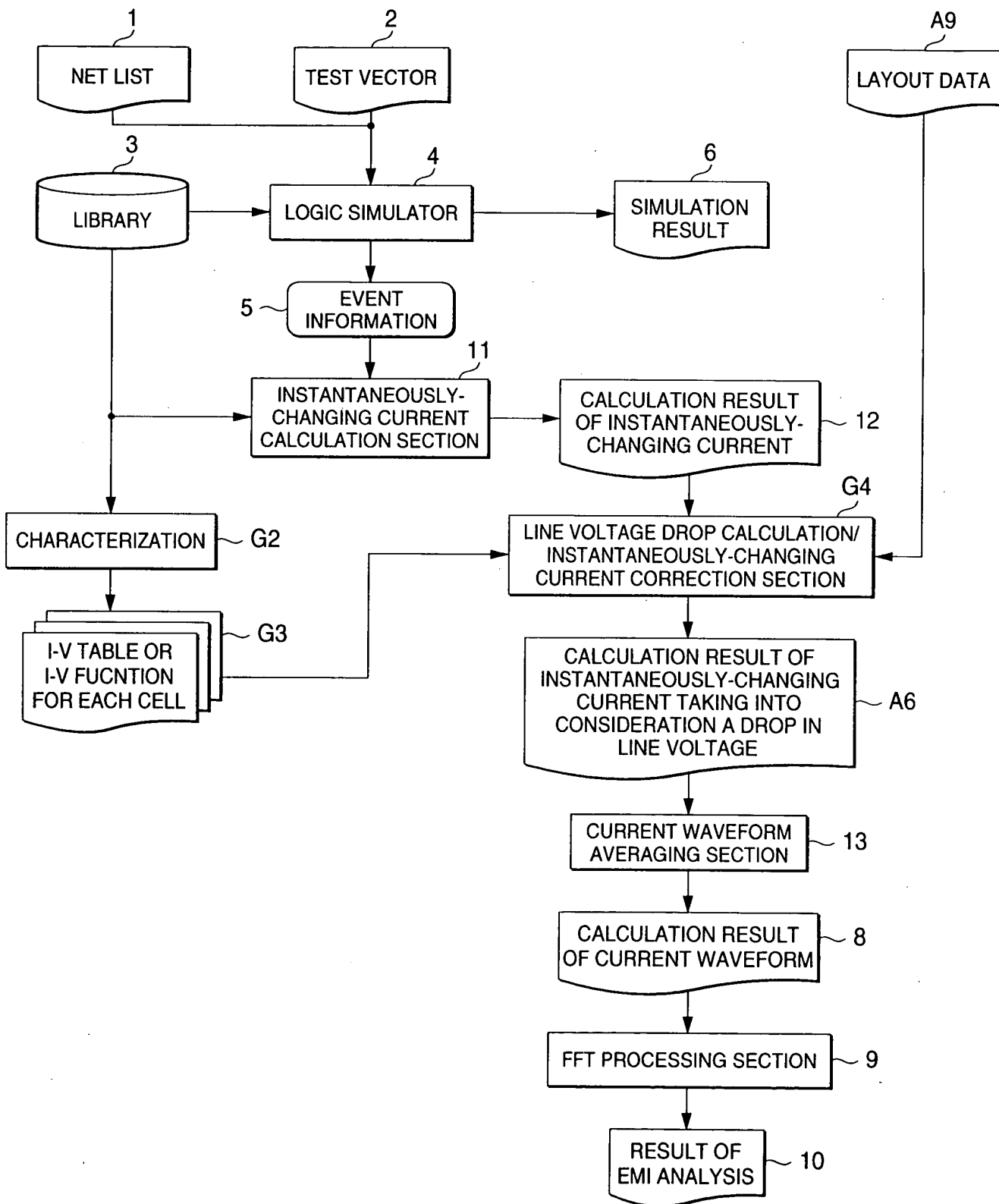
FIG. 90





65/94

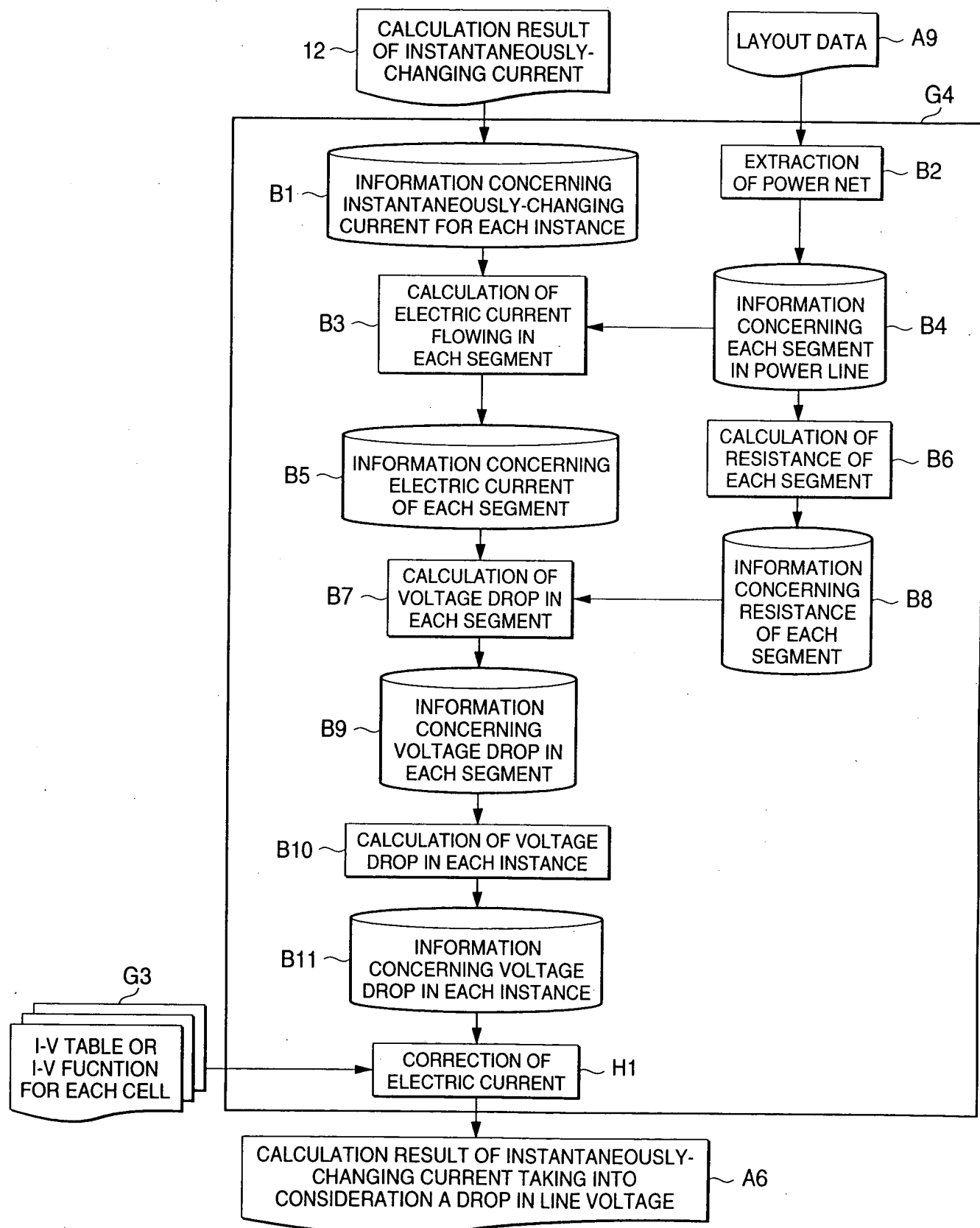
FIG. 91





66/94

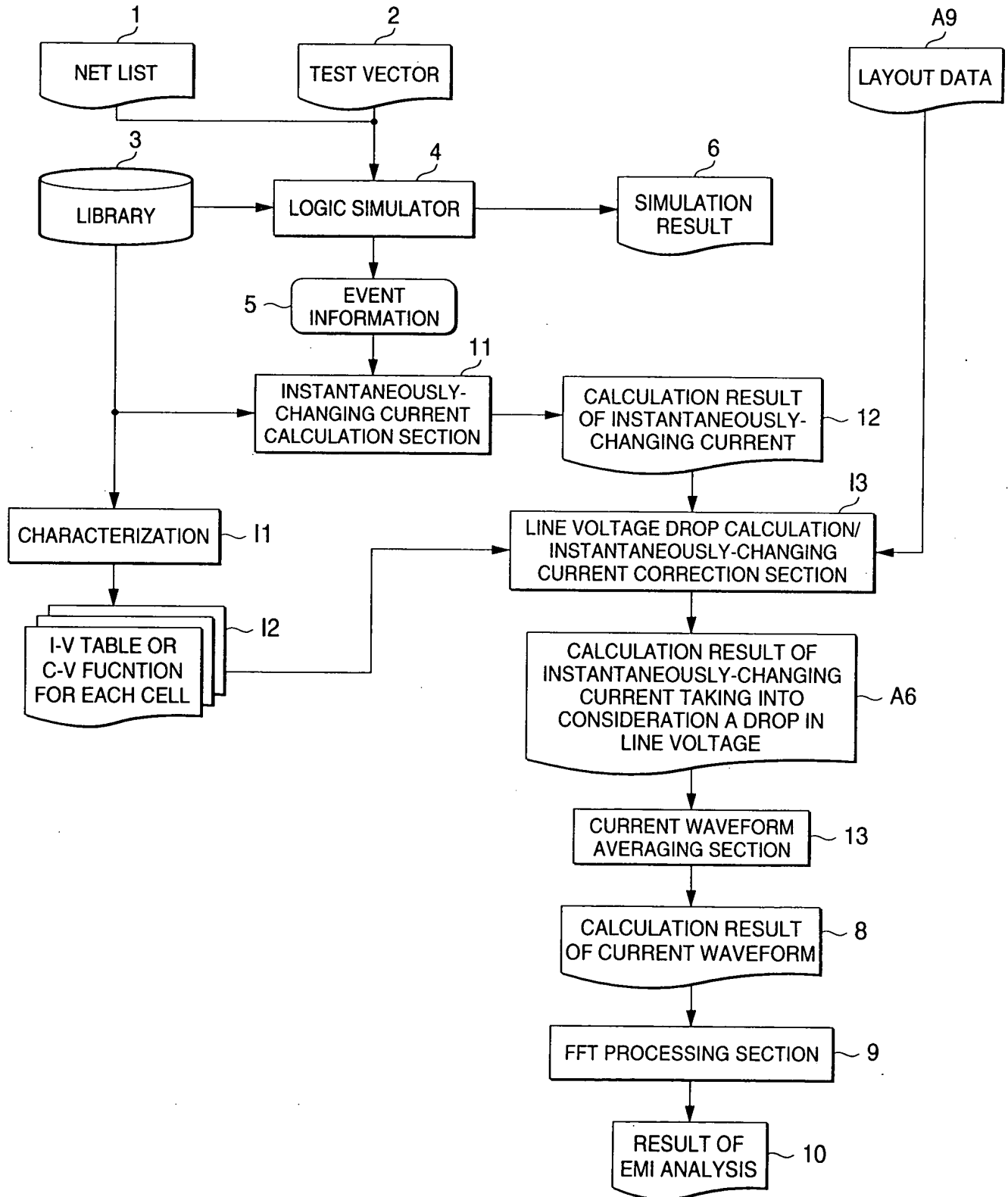
FIG. 92





67/94

FIG. 93





68/94

FIG. 94

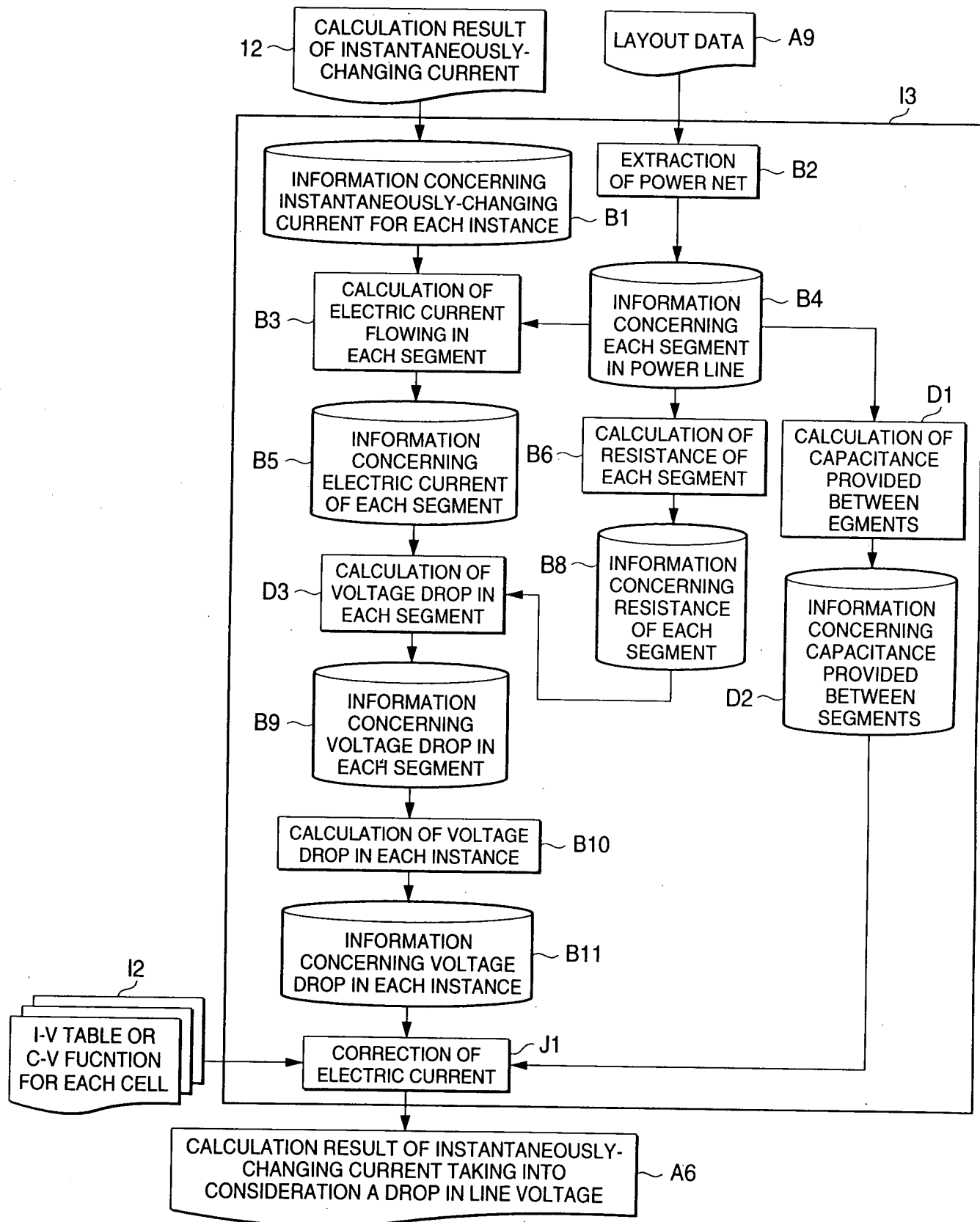
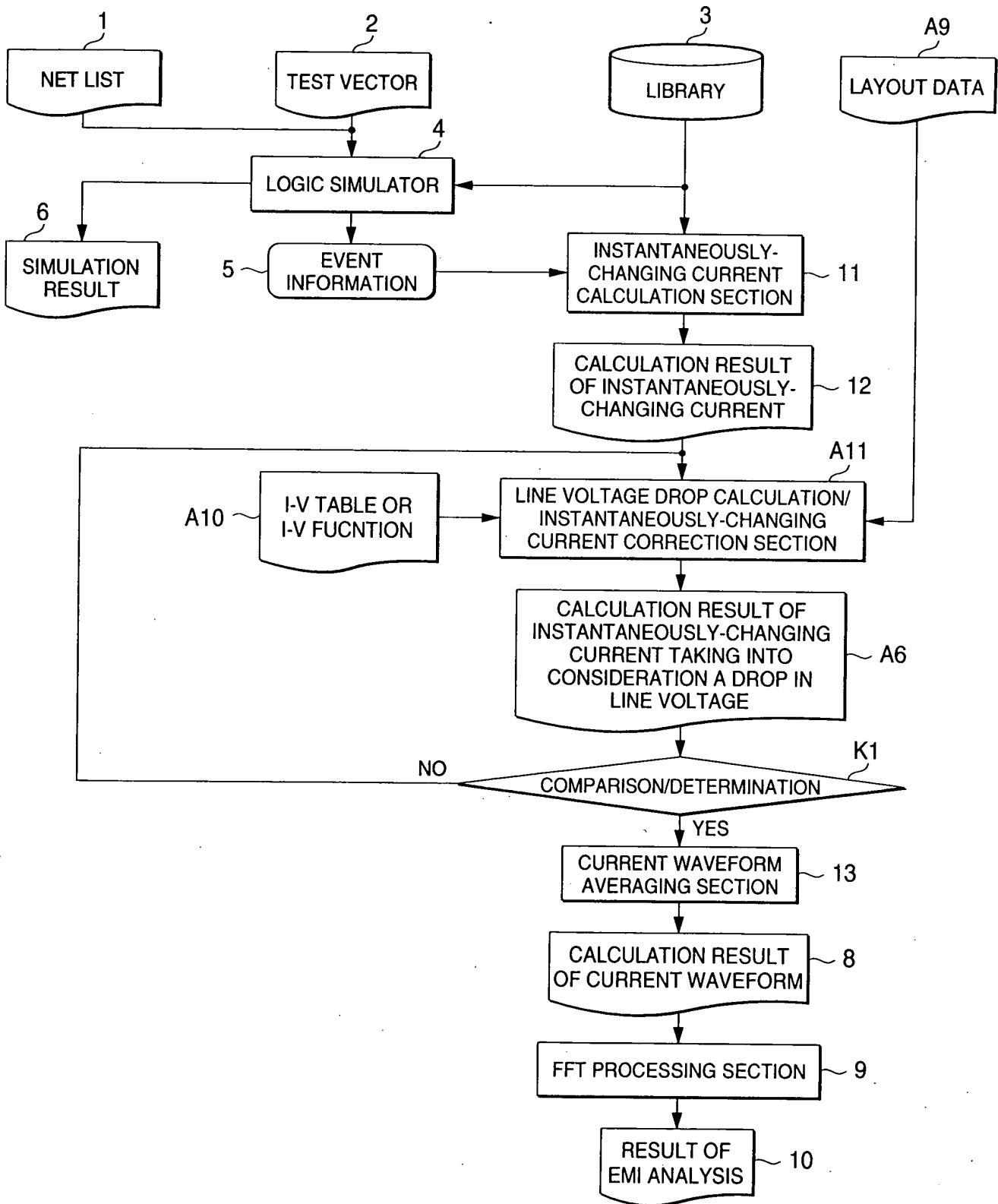




FIG. 95

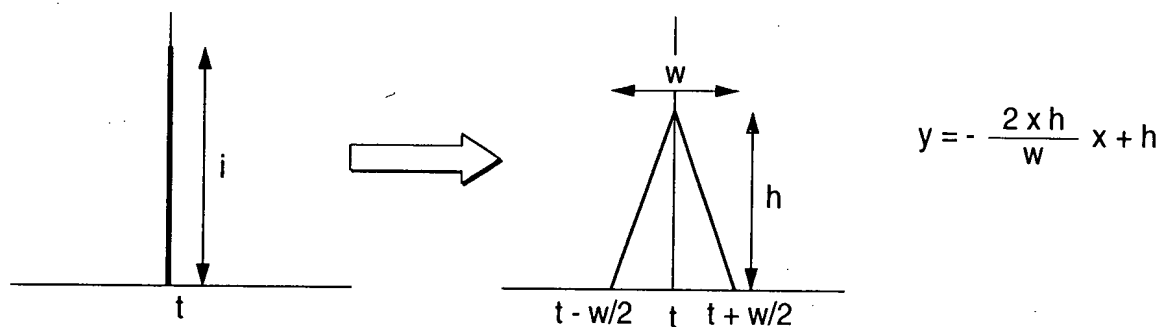




70/94

FIG. 96

TRIANGULAR WAVEFORM MODEL (TWENTY-THIRD EMBODIMENT)

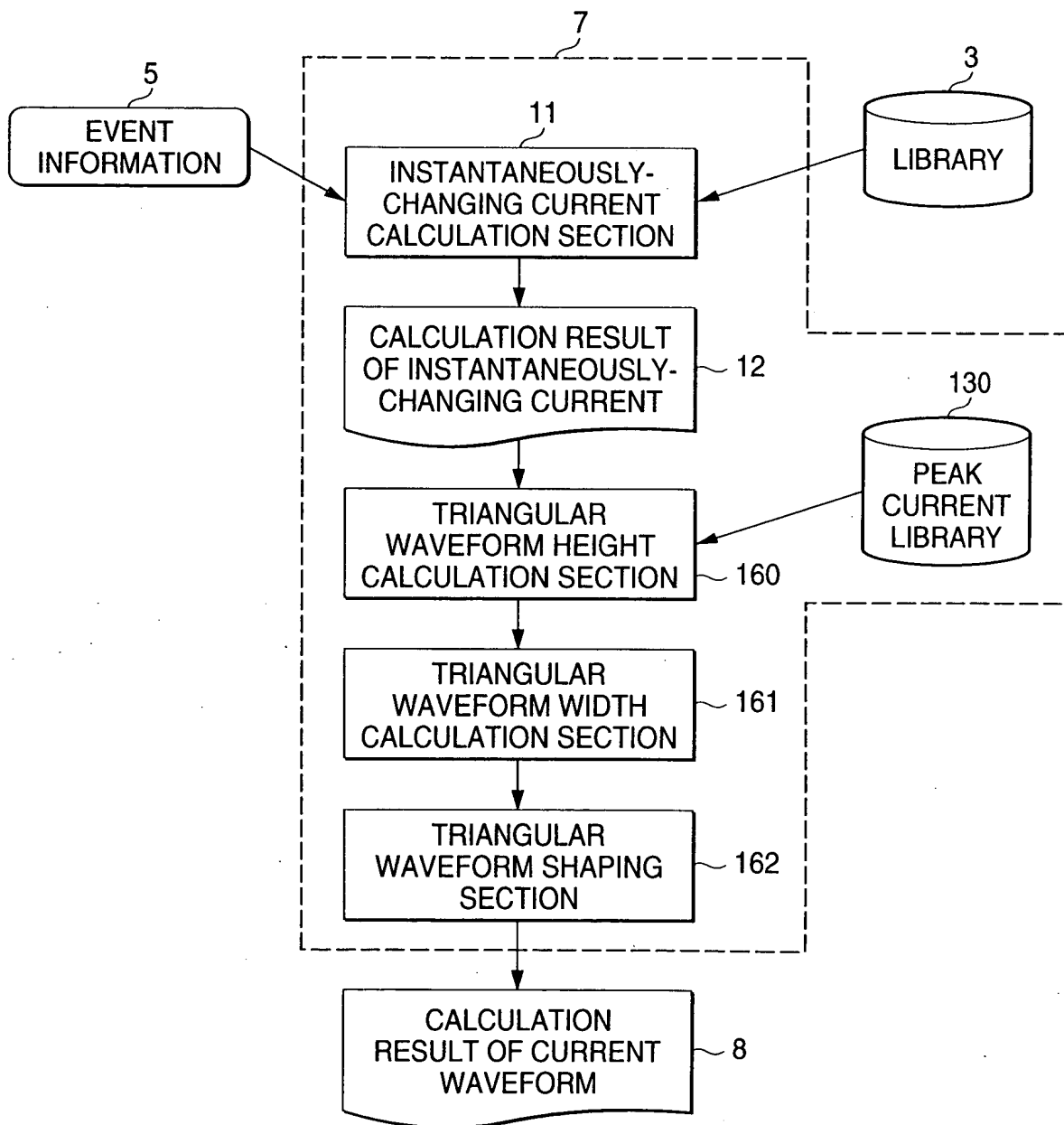




71/94

FIG. 97

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (TWENTY-THIRD EMBODIMENT)

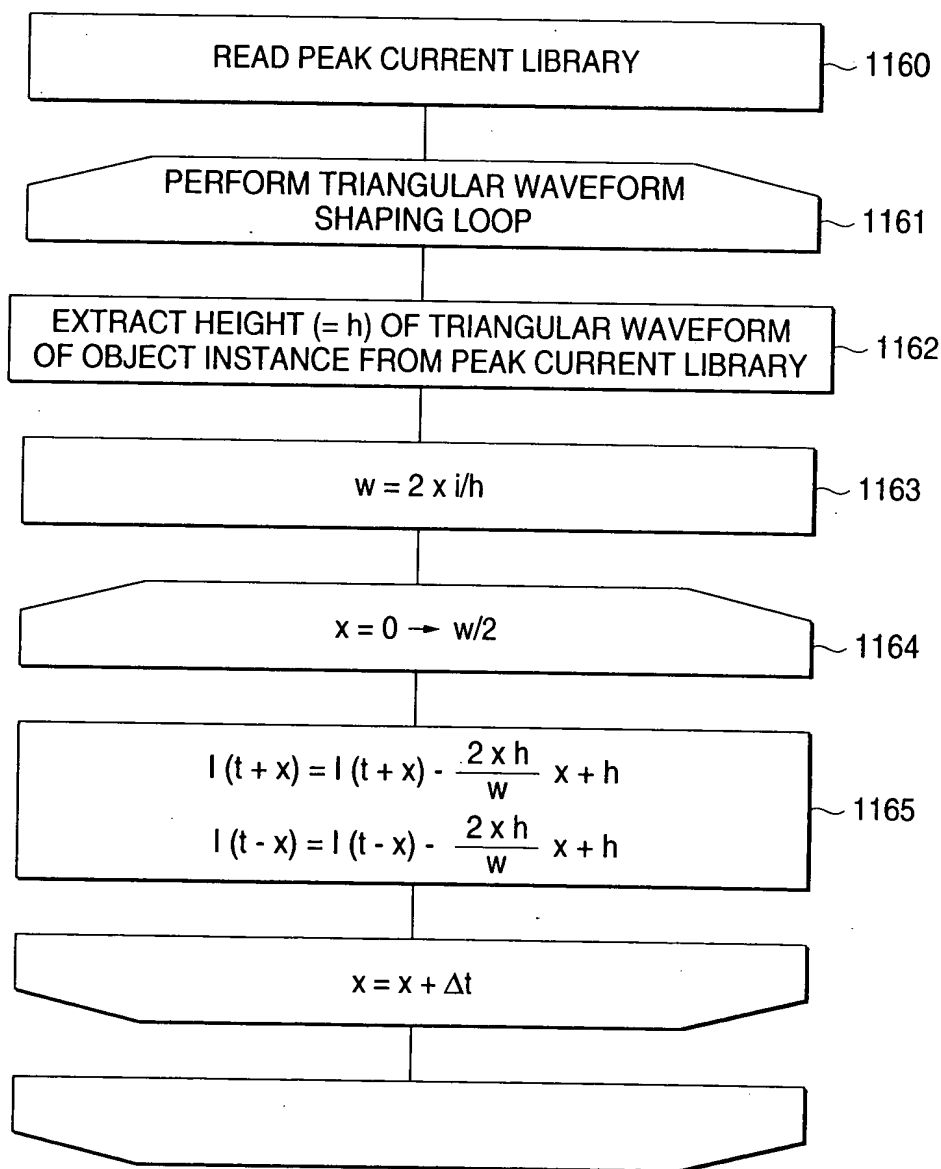




72/94

FIG. 98

FLOWCHART OF TRIANGULAR WAVEFORM SHAPING

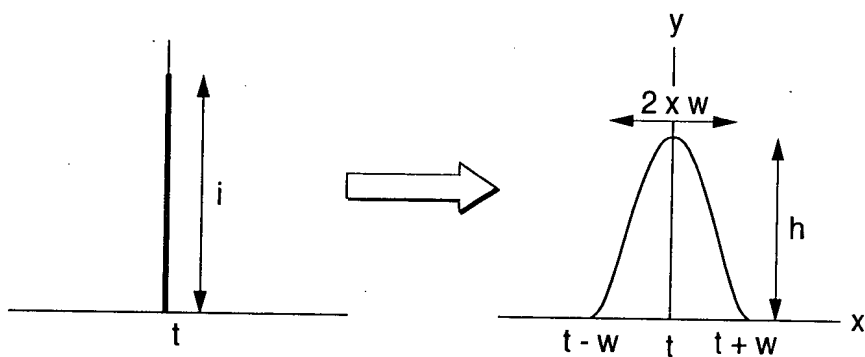




73/94

FIG. 99

MULTI-ORDER-FUNCTION MODEL (TWENTY-FOURTH EMBODIMENT)



$$y = a (x - w)^2 (x + w)^2$$

$$w = \frac{15 x i}{16 x h}$$

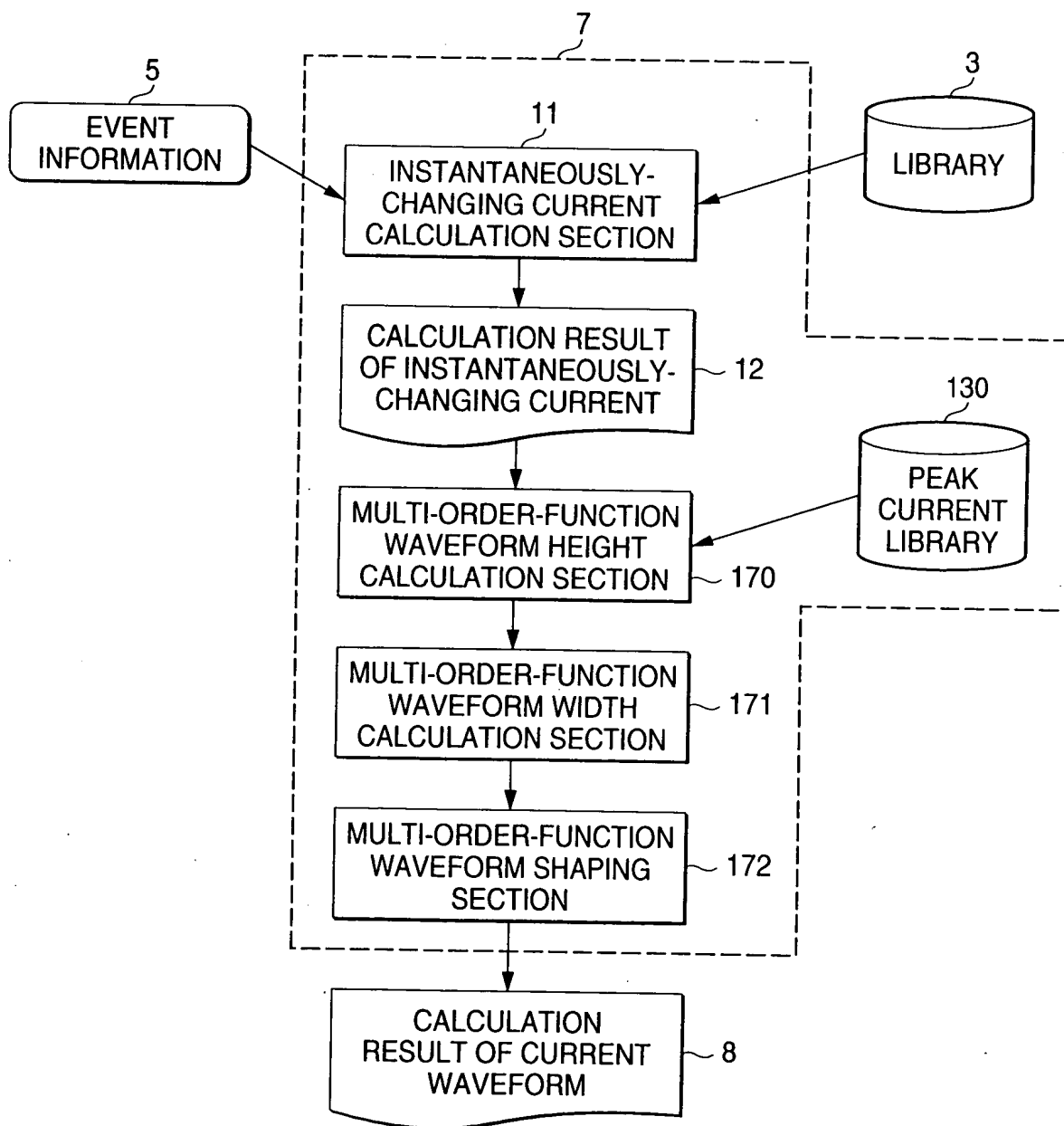
$$a = \frac{15}{16 x w^5} i$$



74/94

FIG. 100

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (TWENTY-FOURTH EMBODIMENT)

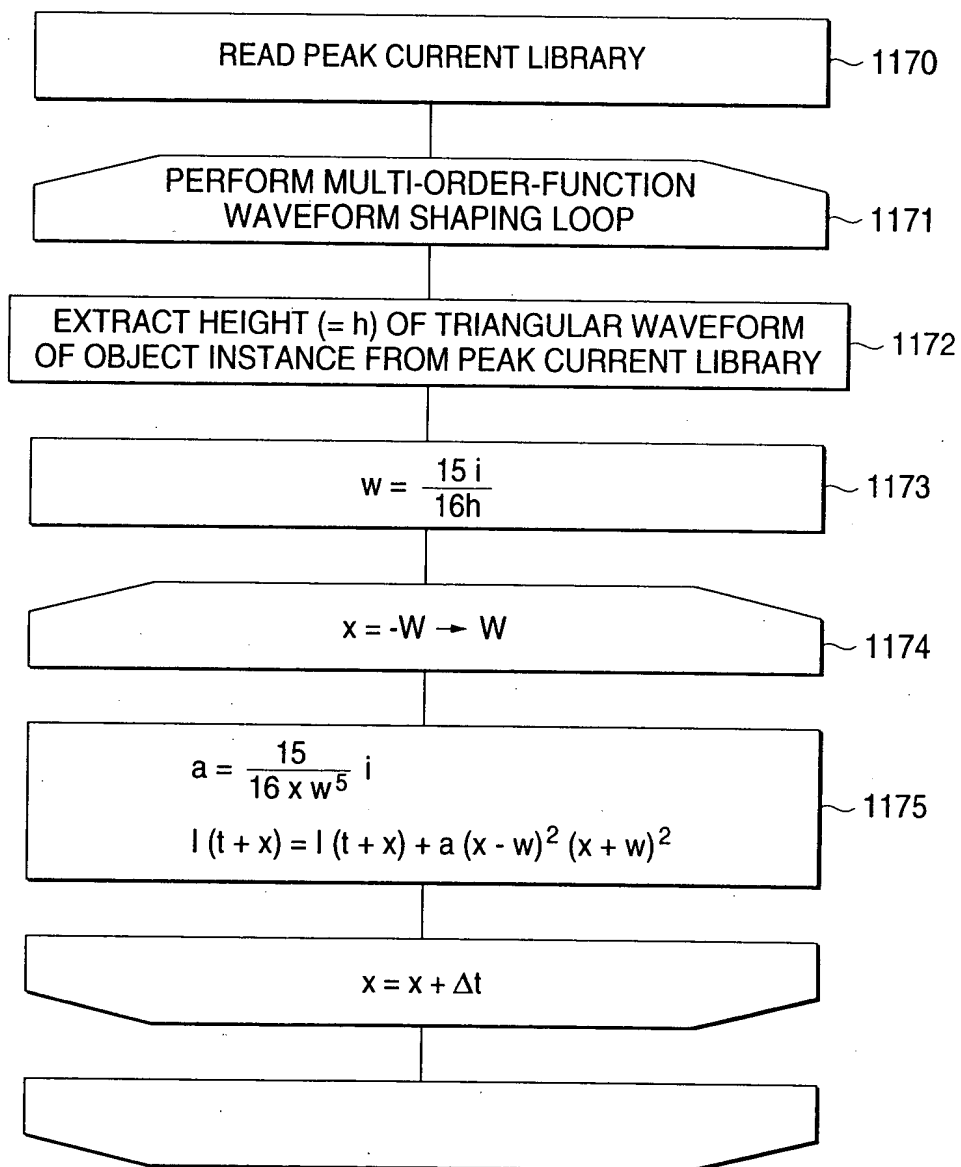




75/94

FIG. 101

FLOWCHART OF MULTI-ORDER-FUNCTION WAVEFORM SHAPING

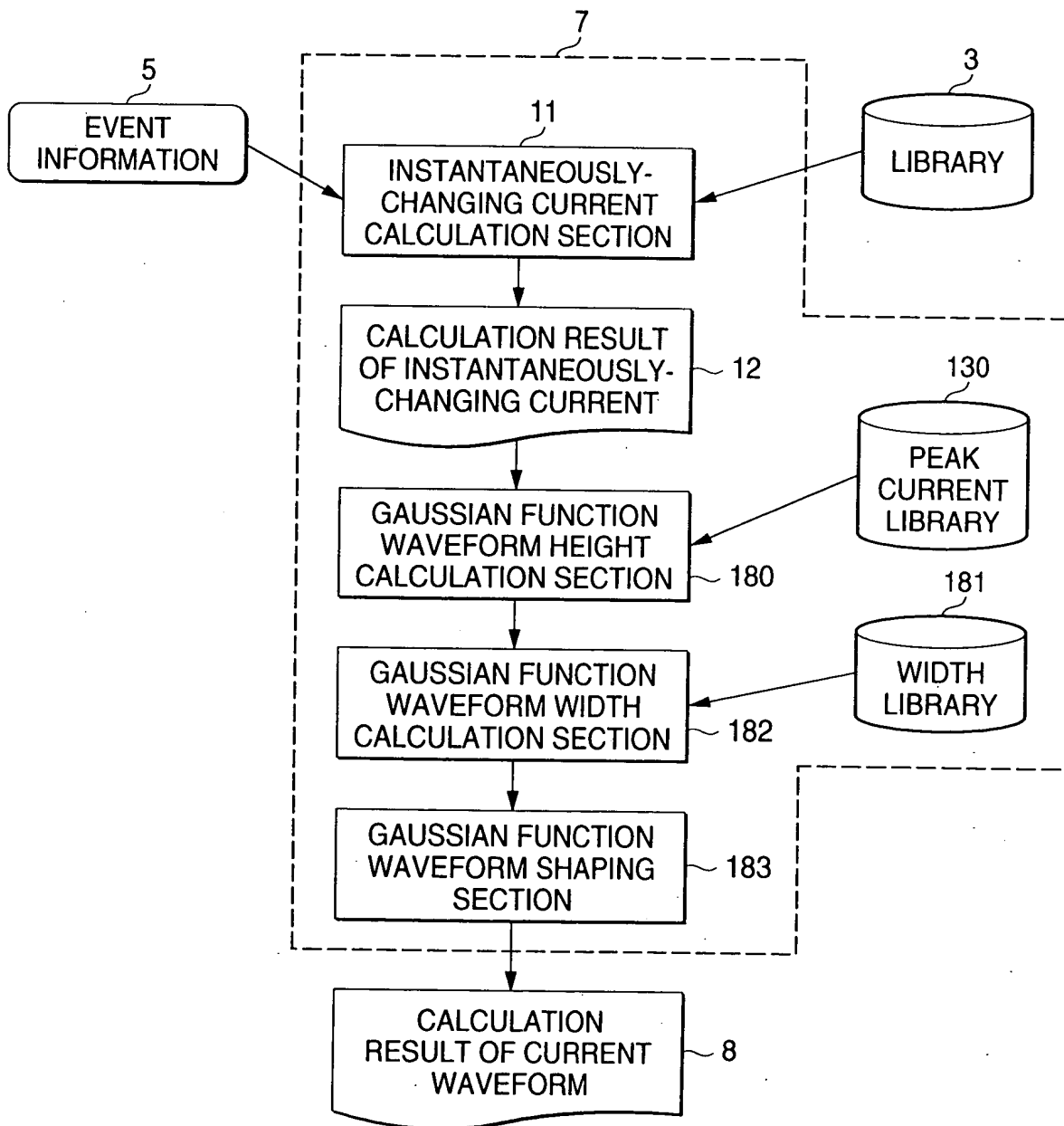




76/94

FIG. 102

BLOCK DIAGRAM SHOWING A CURRENT WAVEFORM
CALCULATION SECTION (TWENTY-FIFTH EMBODIMENT)

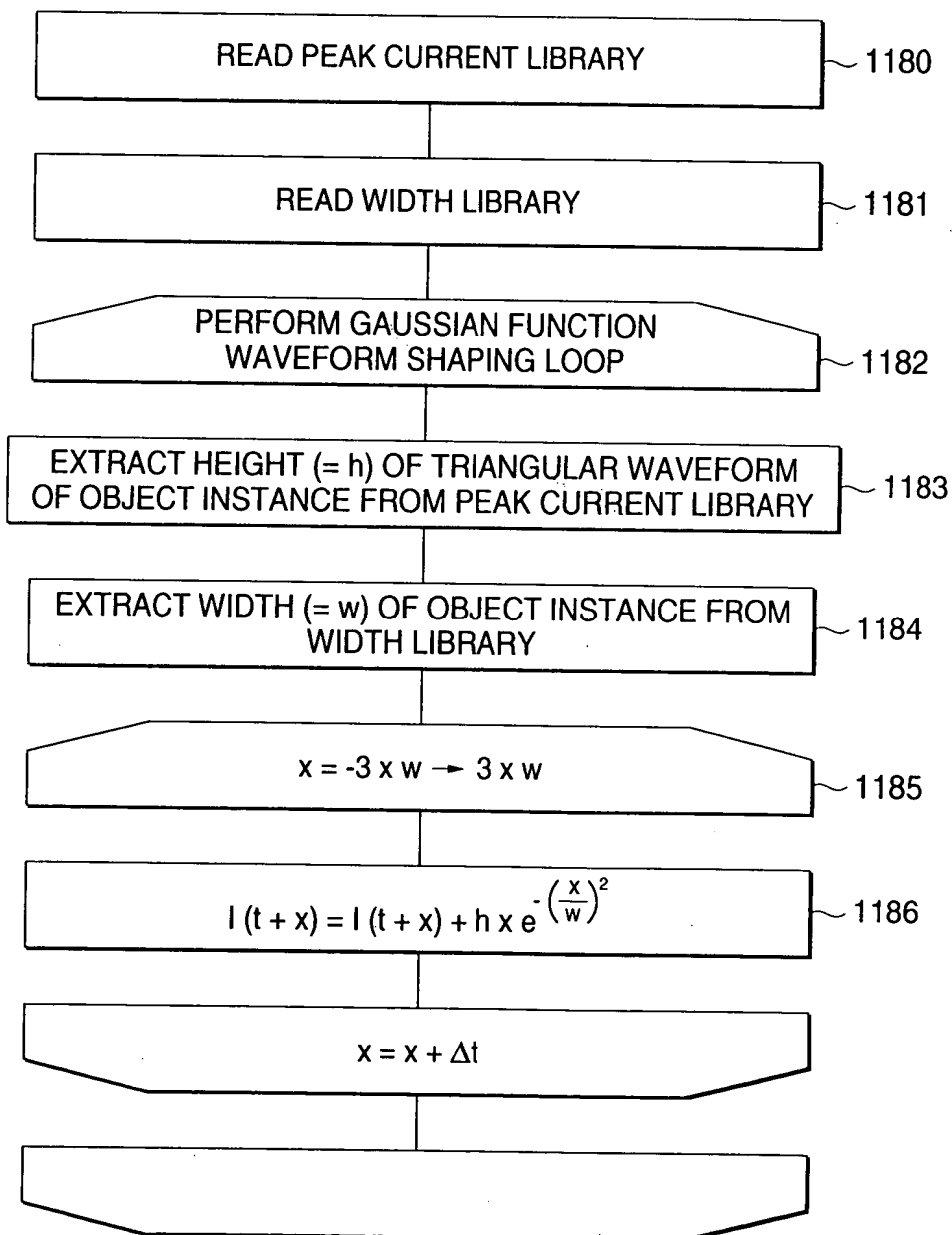




77/94

FIG. 103

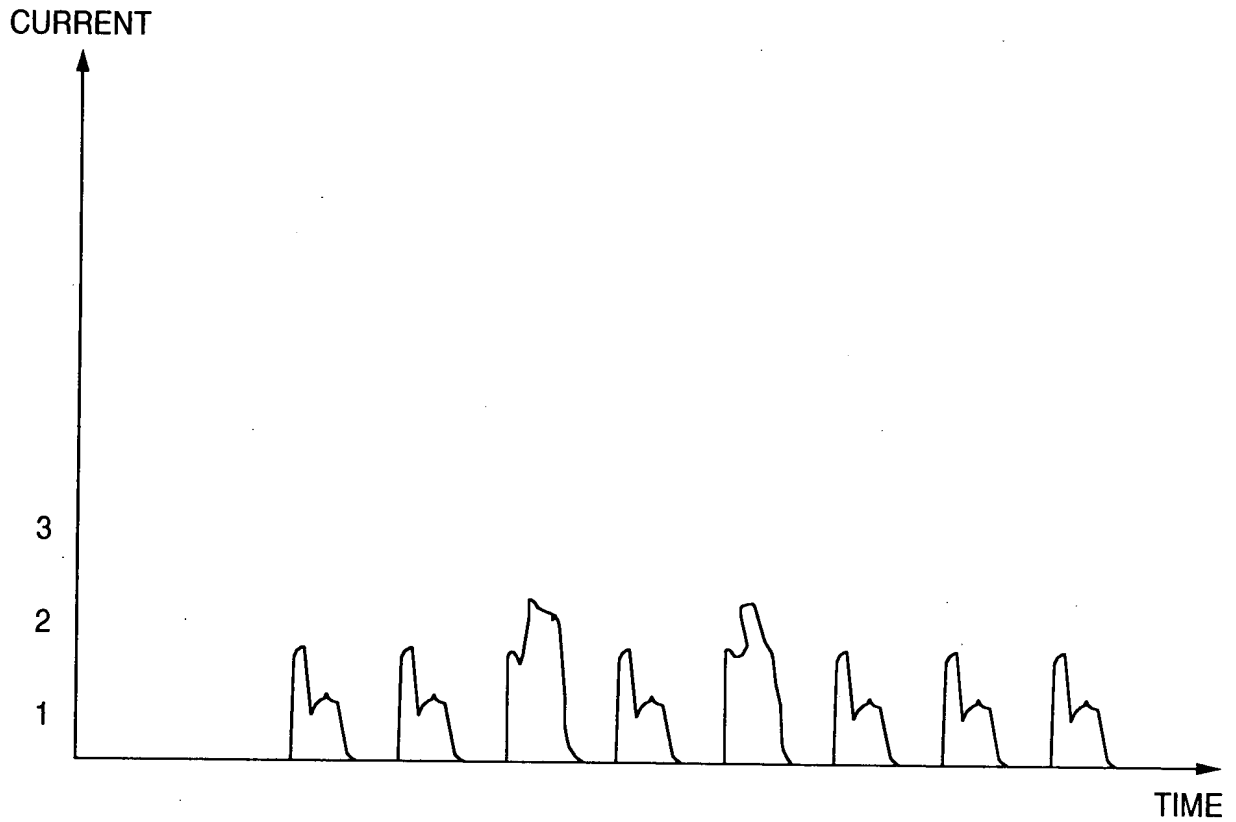
FLOWCHART OF GAUSSIAN FUNCTION WAVEFORM SHAPING





78/94

FIG. 104





79/94

FIG. 105

FLIP-FLOP FF/Q

TOTAL FEEDTHROUGH CURRENT	3mA
PEAK VALUE OF FEEDTHROUGH CURRENT	1mA
TOTAL CHARGE CURRENT	4mA
PEAK VALUE OF CHARGE CURRENT	2mA

FLIP-FLOP FF/CK

TOTAL FEEDTHROUGH CURRENT	2mA
PEAK VALUE OF FEEDTHROUGH CURRENT	1mA
TOTAL CHARGE CURRENT	0mA
PEAK VALUE OF CHARGE CURRENT	0mA

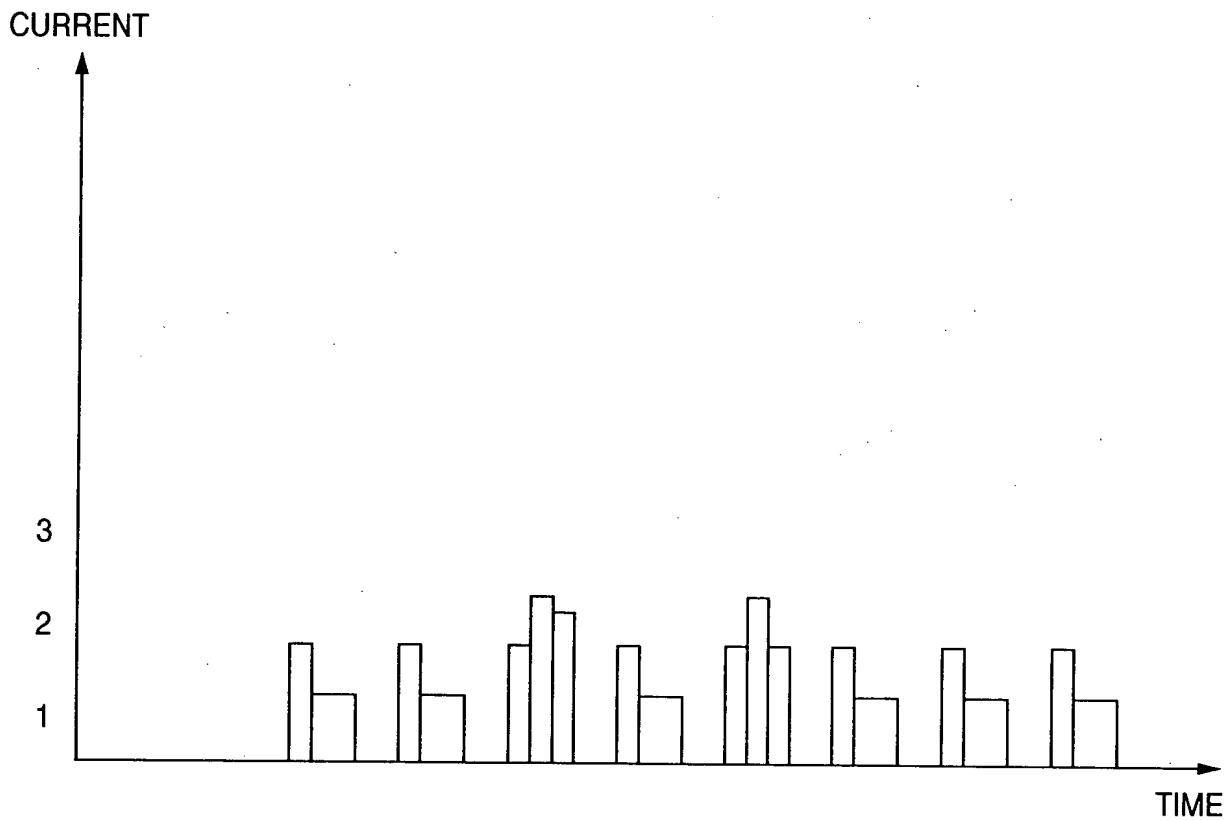
BUFFER BUF/Y

TOTAL FEEDTHROUGH CURRENT	2mA
PEAK VALUE OF FEEDTHROUGH CURRENT	1mA
TOTAL CHARGE CURRENT	0mA
PEAK VALUE OF CHARGE CURRENT	0mA



80/94

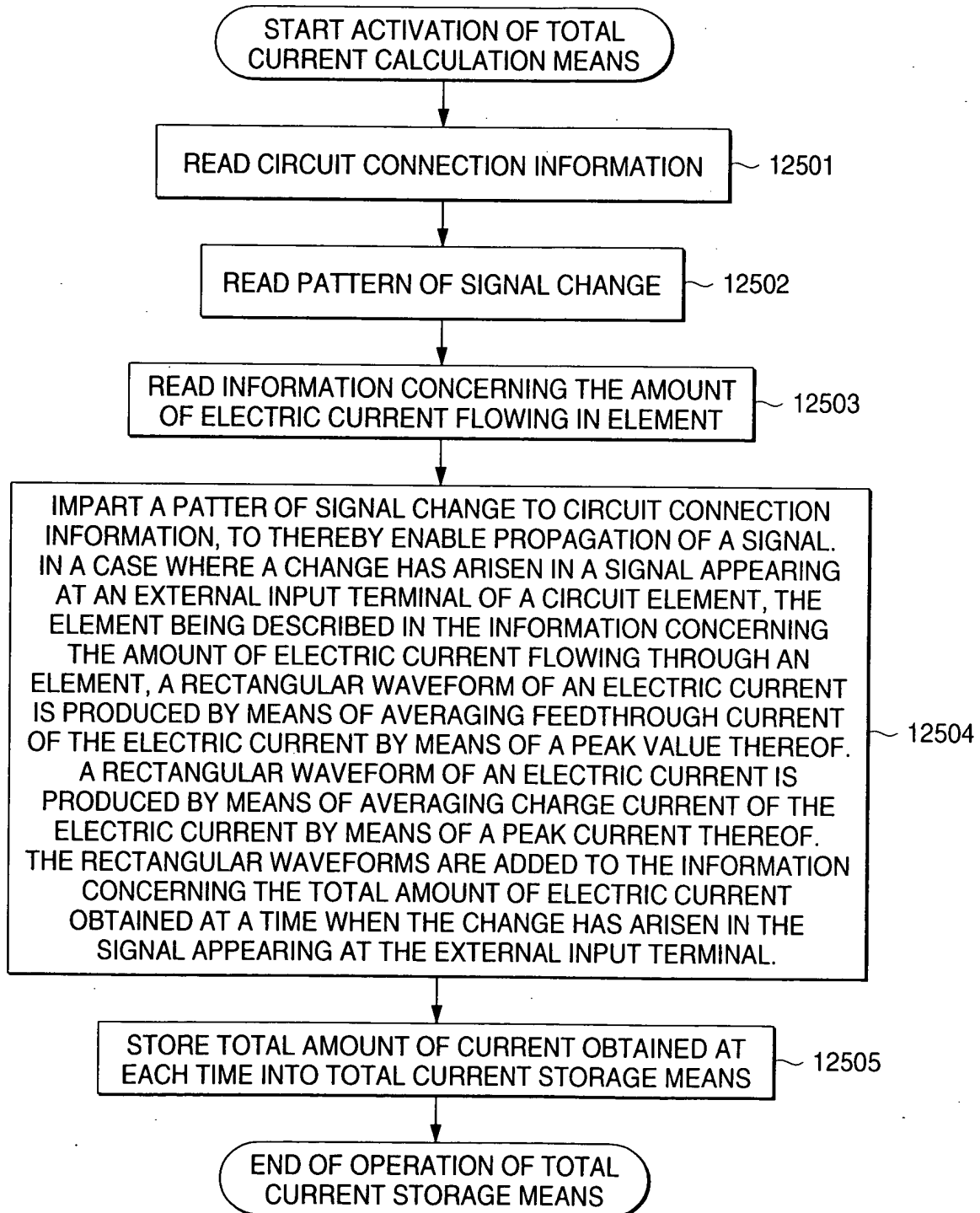
FIG. 106





81/94

FIG. 107



MAY 21 2004
U.S. PATENT & TRADEMARK OFFICE

82/94

FIG. 108

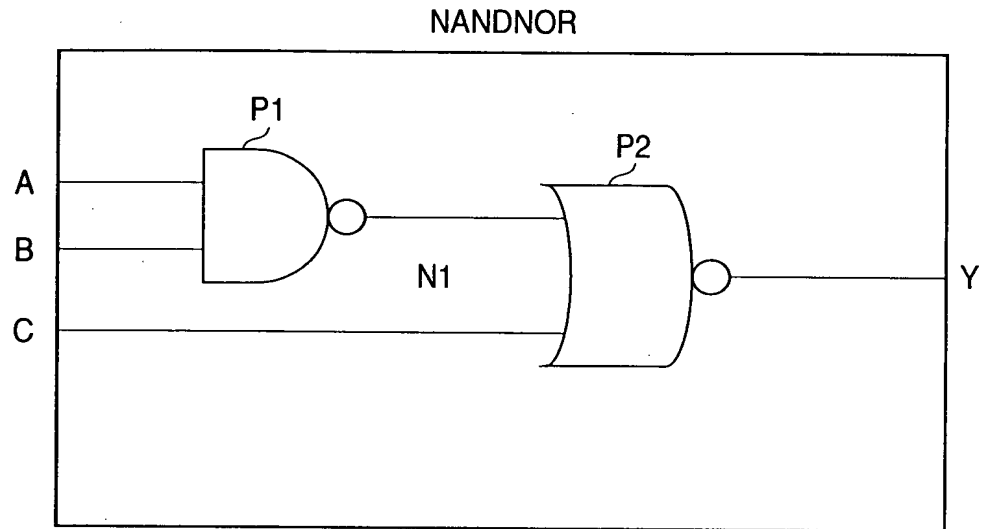
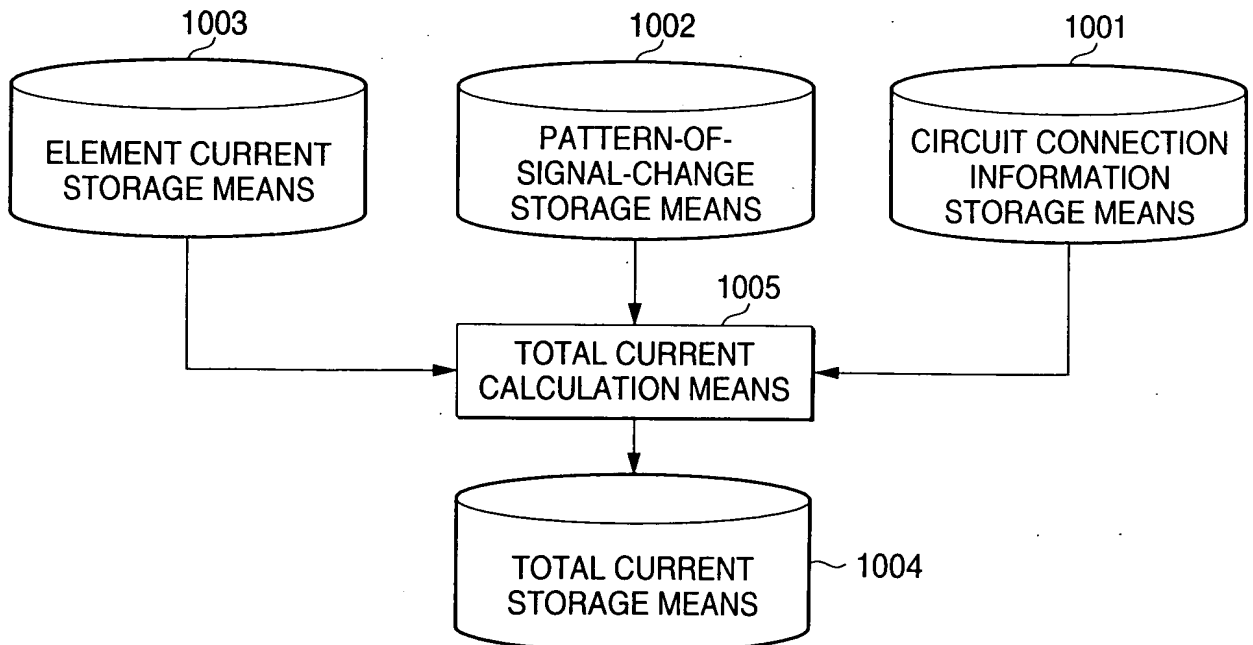
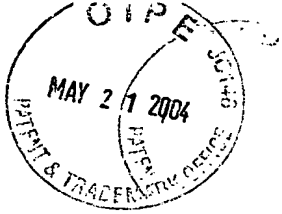


FIG. 109





83/94

FIG. 110

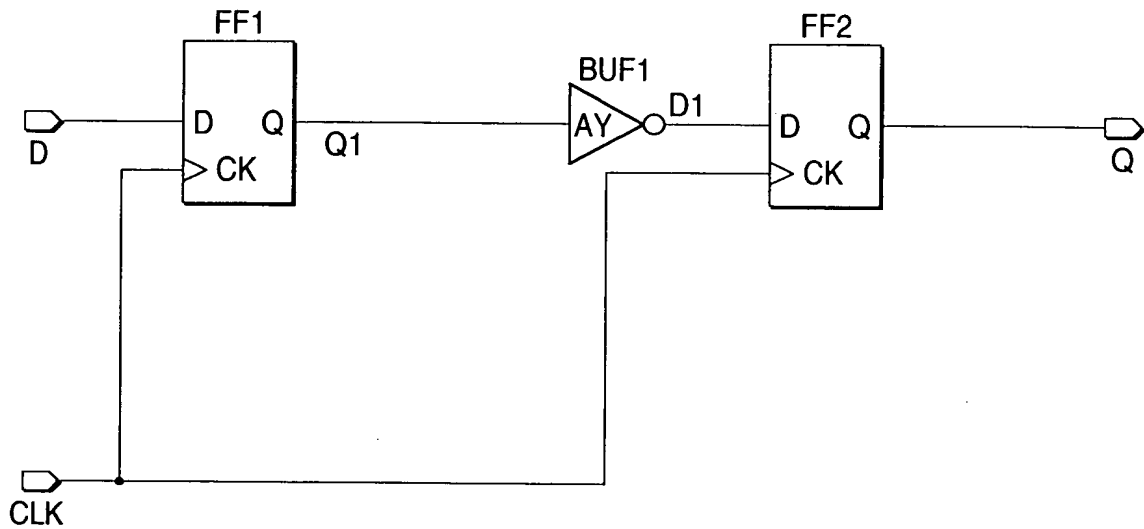
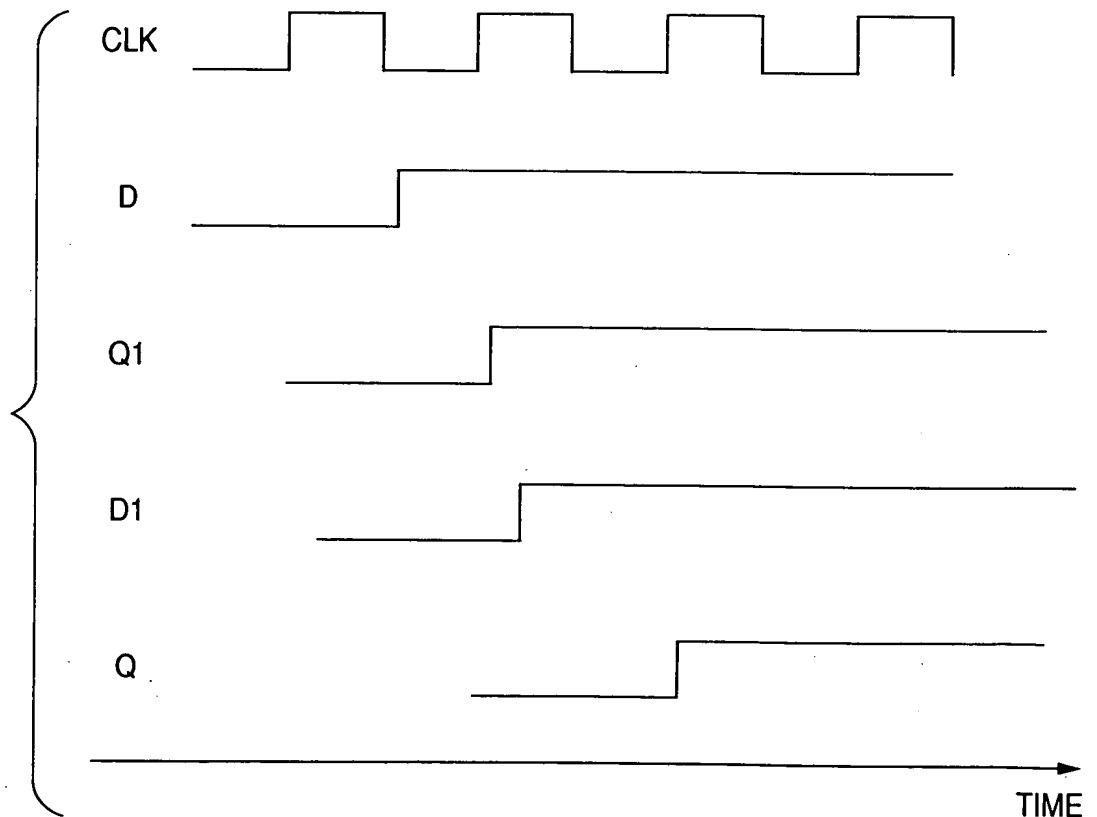


FIG. 111





84/94

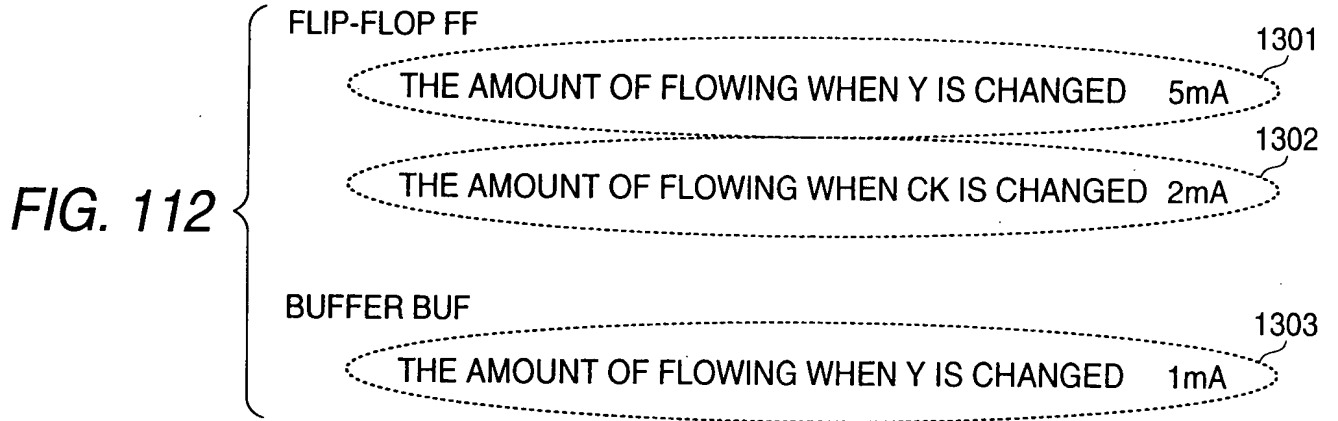
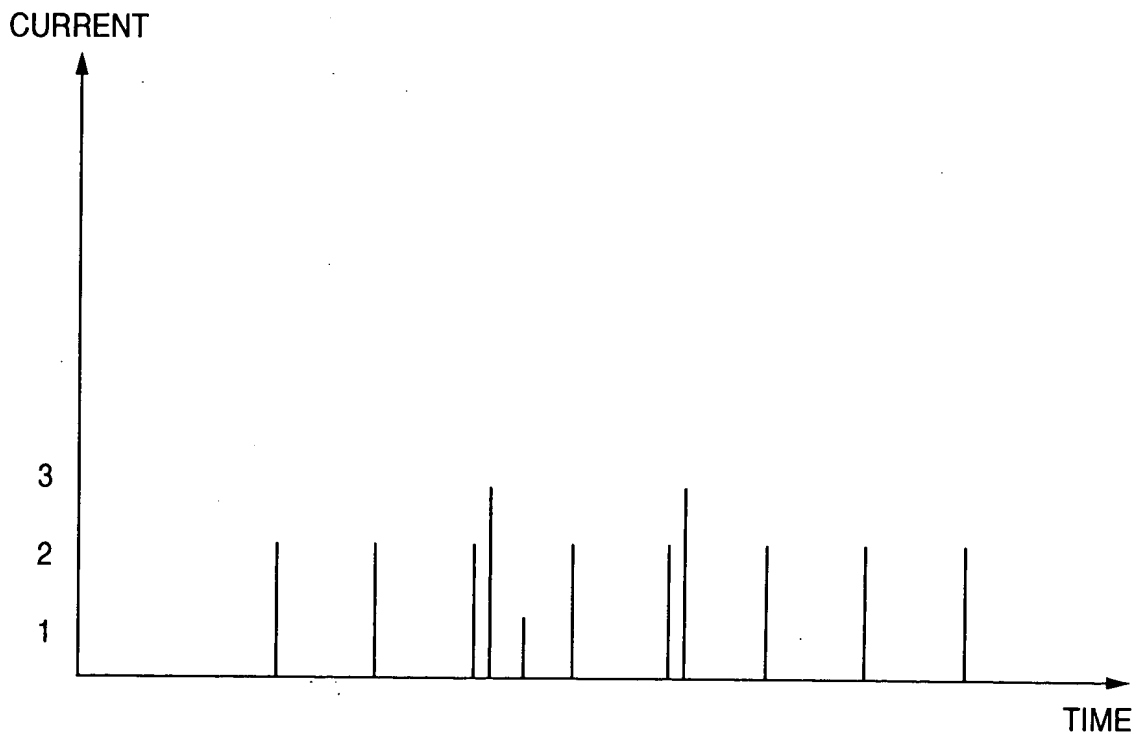


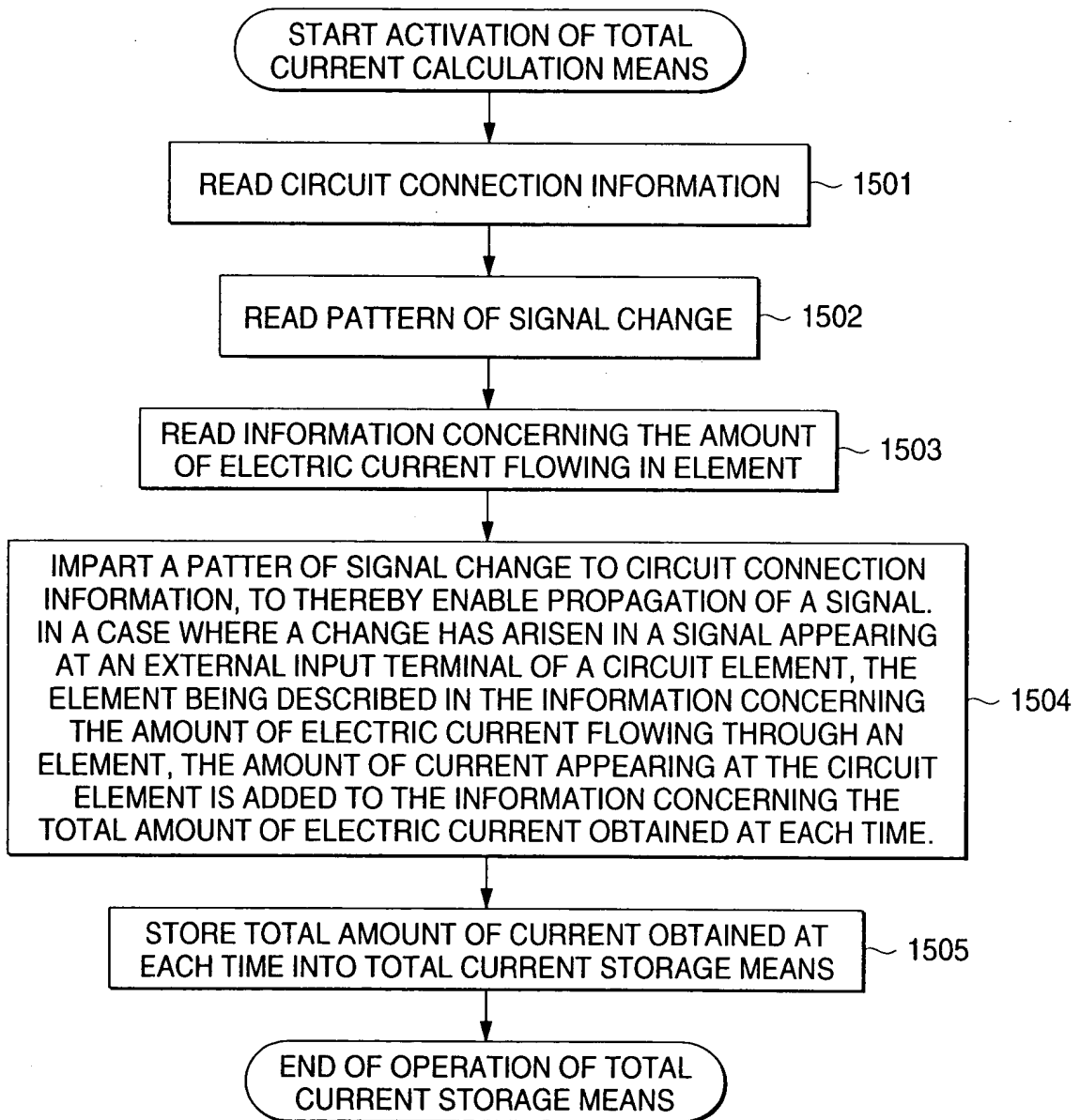
FIG. 113





85/94

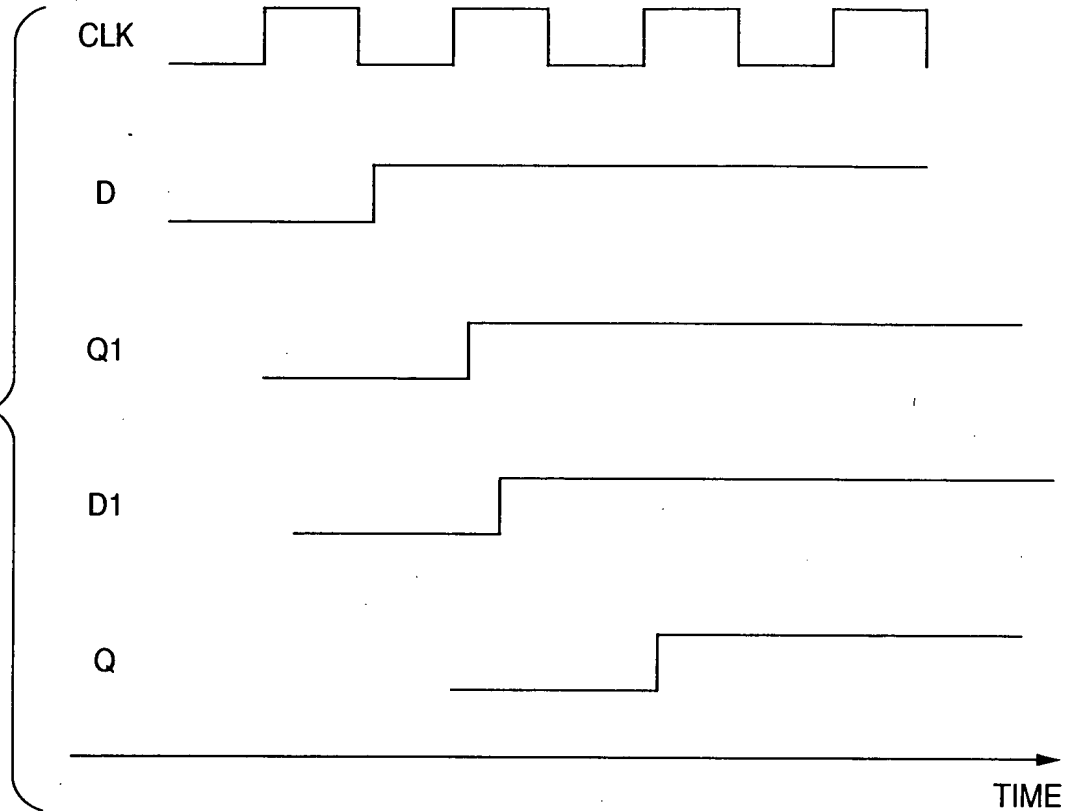
FIG. 114





86/94

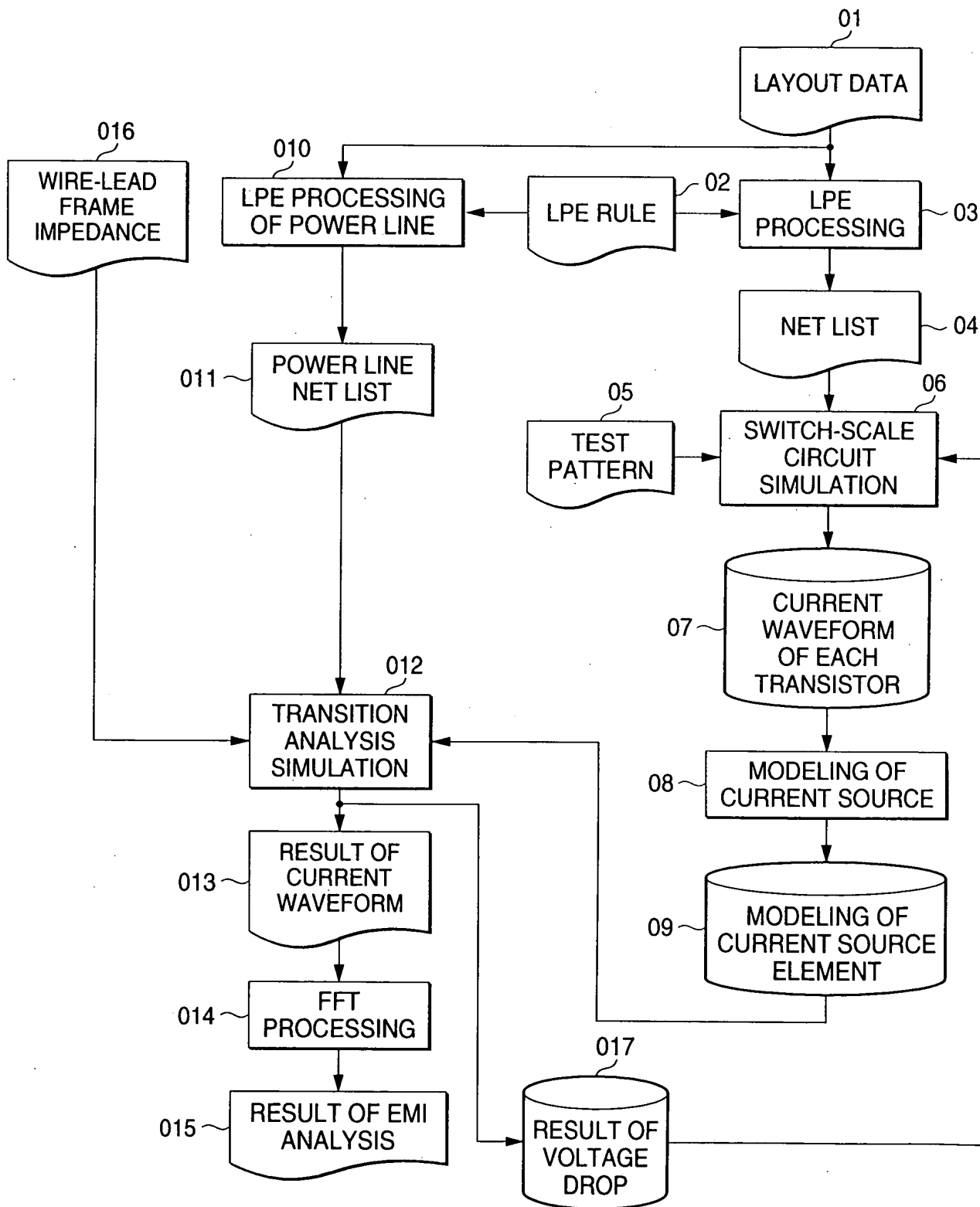
FIG. 115





87/94

FIG. 116



88/94

FIG. 117A

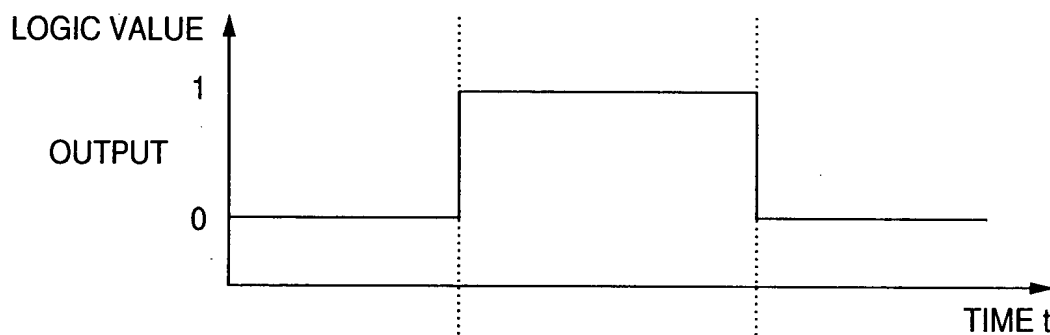
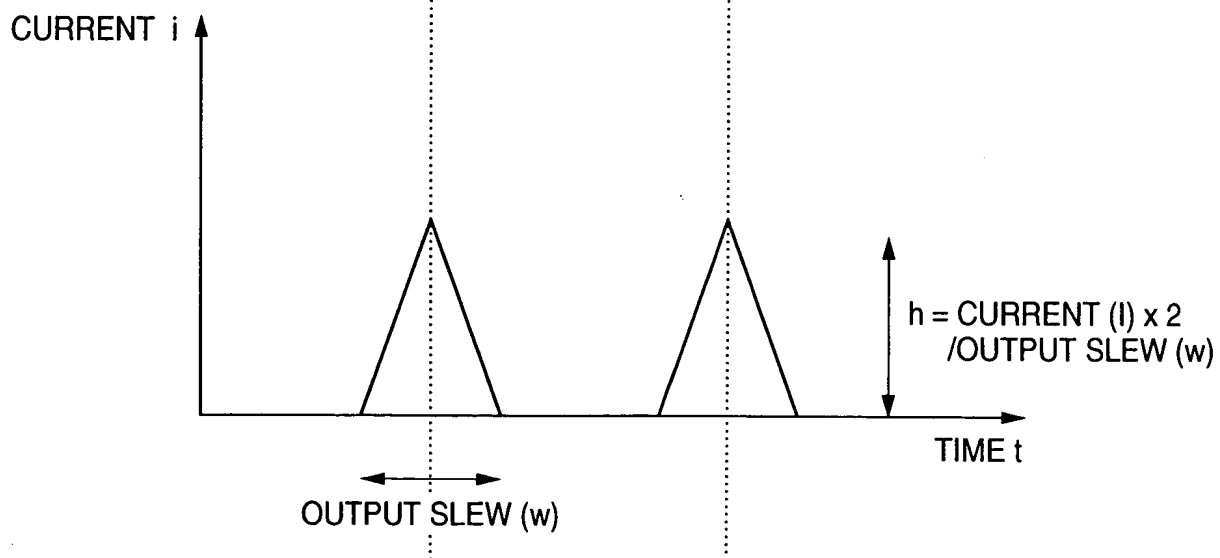


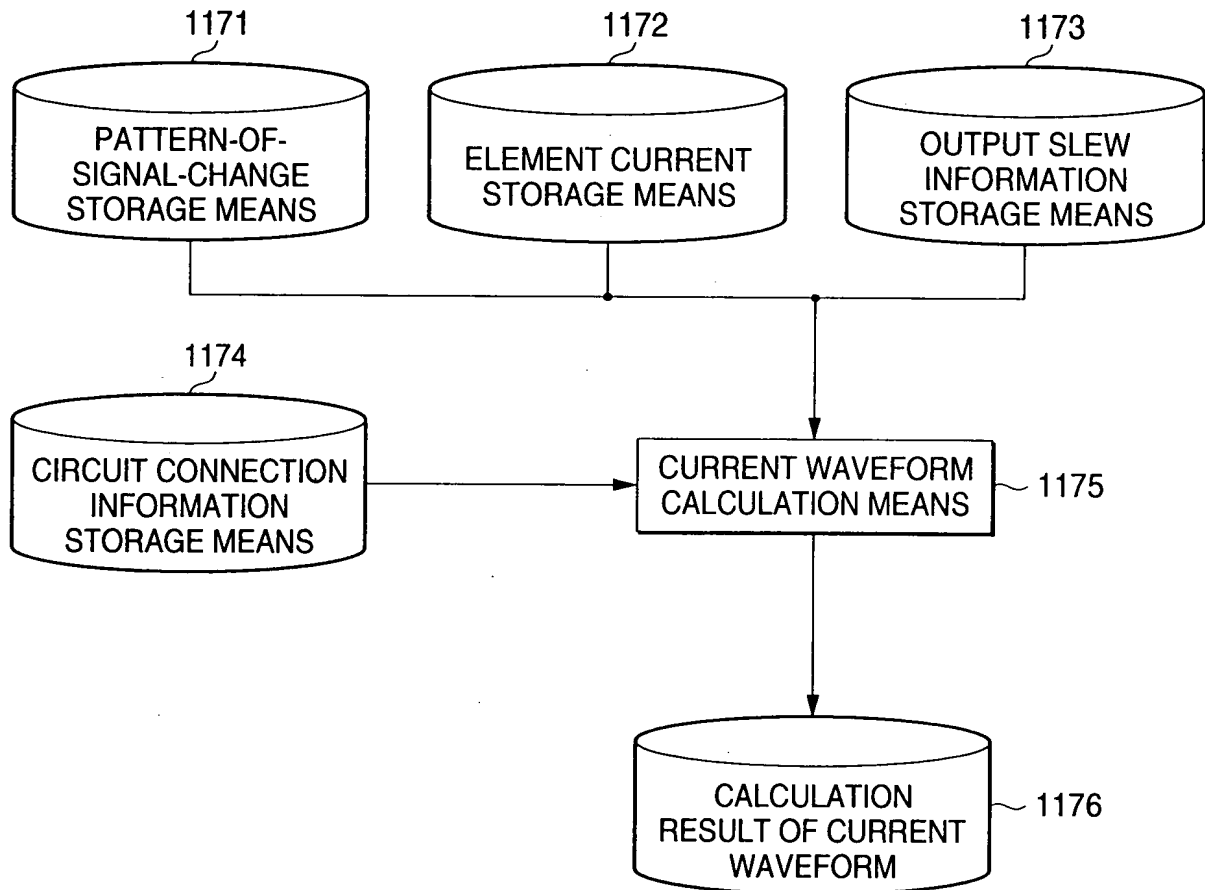
FIG. 117B





89/94

FIG. 118

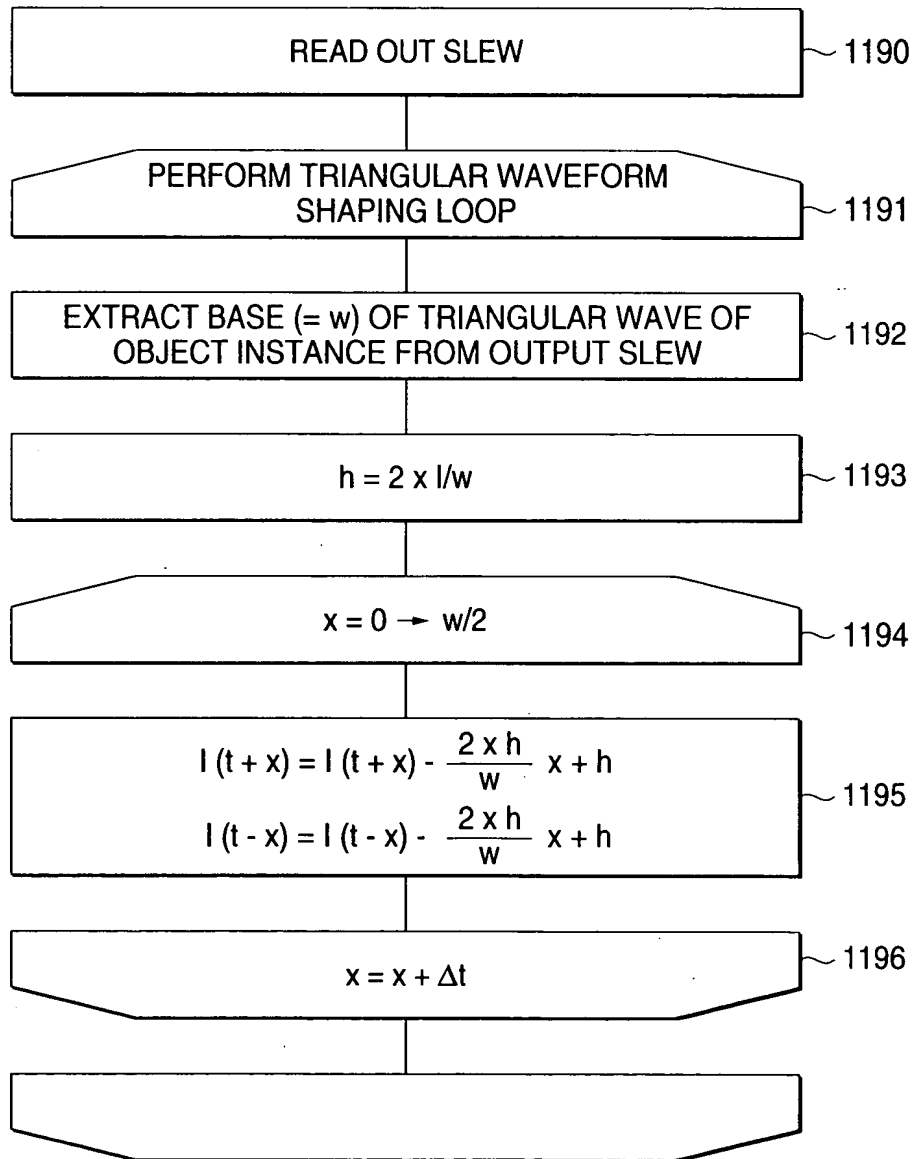




90/94

FIG. 119

FLOWCHART OF CALCULATION OF CURRENT WAVEFORM





91/94

FIG. 120A

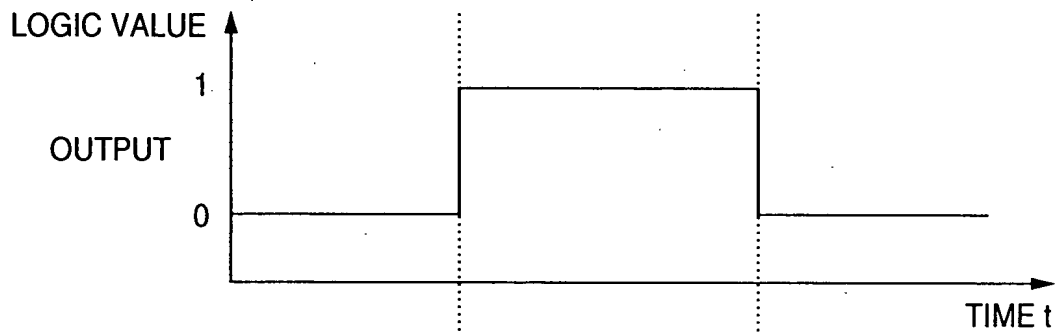
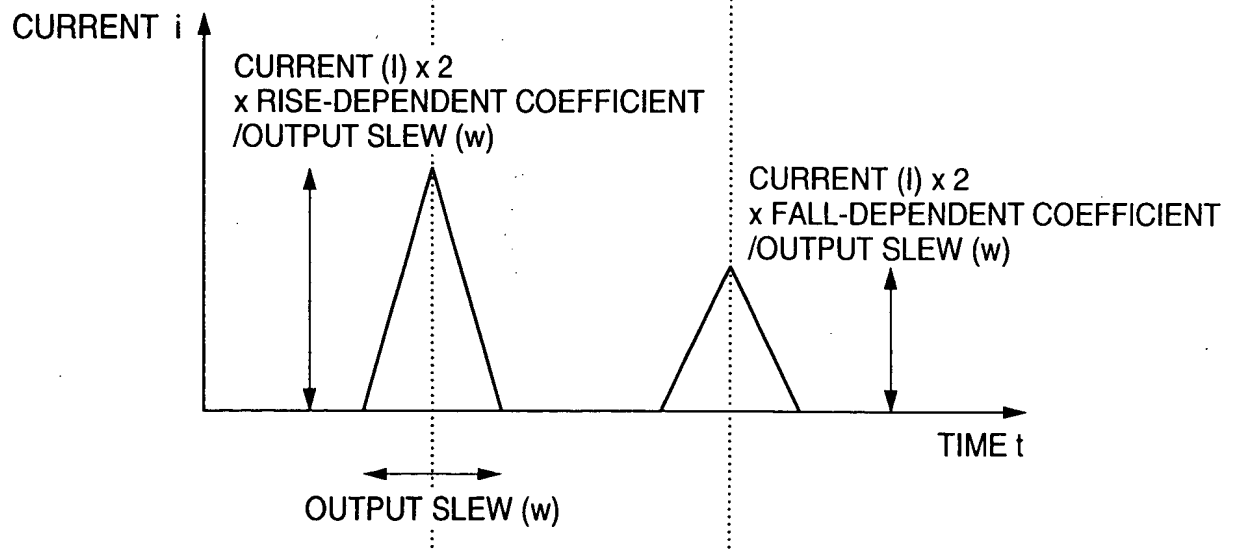


FIG. 120B

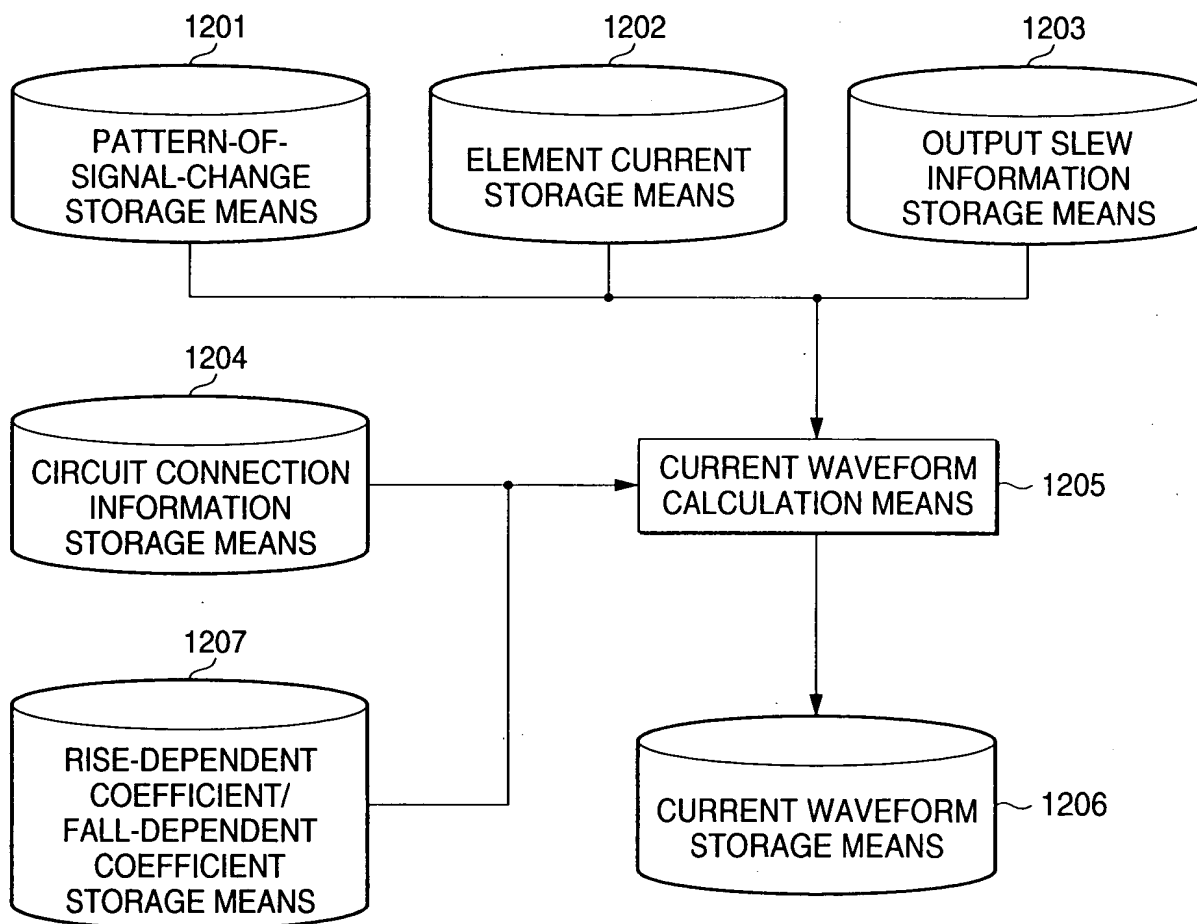


* FALL-DEPENDENT COEFFICIENT = 2 - RISE-DEPENDENT COEFFICIENT



92/94

FIG. 121





93/94

FIG. 122A

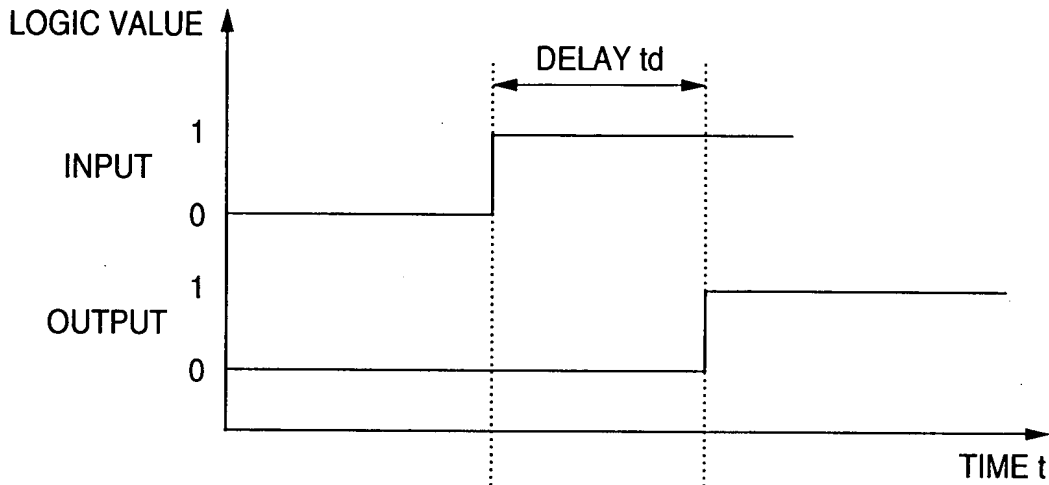


FIG. 122B

